# usau Hawley

## 49756

Access DB# \_\_\_\_\_

### SEARCH REQUEST FORM

Scientific and Technical Information Center

			1
Requester's Full Name: Many	la Lamma		<u>'01</u>
	imper 306 - 4541)	Serial Number: <u>19/7-71.595</u>	EMAII
Mail Box and Bldg/Room Location:	(A) Resu	llts Format Preferred (circle): PAPER DISK	E-MAIL
If more than one search is cubmit	ted, please prioritiz	e searches in order of need.	
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Include the elected species or structures, key	ywords, synonyms, acron	yms, and registry numbers, and combine with the con	cept or
utility of the invention. Define any terms the known. Please attach a copy of the cover sh		eaning. Give examples or relevant citations, authors, or abstract	etc, if
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		blogical suuscreen prepa	<u> </u>
Inventors (please provide full names):	Hoessel	ot al	
	2/11/-	(,	<del></del>
Earliest Priority Filing Date:	2/18/2000 (	<u>6</u> e(many)	
*For Sequence Searches Only* Please include		parent, child, divisional, or issued patent numbers) along	with the
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Point of Contact Susan Hanley		Mank,	7
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STAFF USE ONLY	Type of Search	Vendors and cost where applicable	a separate
Searcher: Hanky	NA Sequence (#)	STN)	
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Searcher Location:	Structure (#)	Questel/Orbit	
Date Searcher Picked Up:	Bibliographic	Dr.Link	
Date Completed: 9/12	Litigation	Lexis/Nexis	
Searcher Prep & Review Time:	Fulltext	Sequence Systems	<del></del>
Clerical Prep Time:	Patent Family	<del>-</del>	
Online Time:	Other	Other (specify)	

PTO-1590 (1-2000)

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=> d his
     (FILE 'HOME' ENTERED AT 10:37:09 ON 12 SEP 2001)
     FILE 'REGISTRY' ENTERED AT 10:37:19 ON 12 SEP 2001
L1
                SCREEN 2127 AND 2067 AND 1992
L2
                STR
L3
                STR
L4
                STR
L5
             50 S L1 AND (L2 OR L3) AND L4
              1.6
                STR L2
             50 S L1 AND (L3 OR L6) AND L4
L7
            145 S "ETHYLENEUREA"
           4475 S "DIVINYL"
L9
             14 S L8 AND L9
L10
L11
           1844 S L1 AND (L3 OR L6) AND L4 FUL parent Search, 1844 apd S
L12
                SAVE L12 LAM595P/A
L13
            102 S L12 AND "SULFATE"
         533476 S ?IMIDAZOL?
T.14
          20288 S "IMIDAZOLIUM"
L15
             41 S L16 AND L13 = 41 polymers w/ imidZolering & a sulfate & purt B
L16
            177 S L15 AND L12
L17
           5728 S "DIALLYL"
L18
            233 S L18 AND L12
L19
     5 S L19 AND "SULFATE" 5 polymers ω/ Sulfate and dially movety & FILE 'REGISTRY' ENTERED AT 11:25:32 ON 12 SEP 2001

p cut B
L20
     FILE 'HCAPLUS' ENTERED AT 11:27:14 ON 12 SEP 2001
L21
             58 S L17
L22
             10 S L20
              68 S L21-22
L23
         226850 S ?CROSSLINK? OR ?CROSS(W)LINK? OR ?CROSS LINK?
L24
L25
              9 S L23 AND L24
          80332 S OLEIC OR OLEATE OR CROTONIC OR CROTONATE OR CINNAMIC OR CINNI
250519 S ?UREA? OR CYANURAT? OR TARTRAMID?
1526 S DIVINYLDIOXANE OR ?ALLYLSILANE OR TETRAVINYLSILANE
L26
L27
         250519 S ?UREA? OR CYANURAT? OR TARTRAMID?
           1526 S DIVINYLDIOXANE OR ?ALLYLSILANE OR TETRAVINYLSILANE
L28
             15 S L112— divir y l'ethylene unea

9 S L23 AND L26-29

16 S L25 OR L30 16 cites for L17 or L20 w/a xlinker of a Sulfati

15 S L29 NOT L31 (fuguat)
L29
L30
L31
L32
     FILE 'REGISTRY' ENTERED AT 12:16:39 ON 12 SEP 2001
           1798 S L12 NOT (L17 OR L20)
L33
            739 S L33 AND L14-15
L34
L35
            228 S L33 AND L18
            228 S L33 AND L18
967 S L34-35 Components As B, but no Sulfate morety
     FILE 'HCAPLUS' ENTERED AT 12:18:08 ON 12 SEP 2001
L37
           2074 S L36
L38
         750220 S ?QUAT?
            810 S L37 AND L38
L39
L40
            308 S L37 AND (L24 OR L26-29)
L41
          53497 S UNSATURATED (3A) (ACID OR ANHYDRID?)
L42
             40 S L37 AND L41
L43
           9270 S FREE RADICAL? (5A) ? POLYMERI?
             58 S L37 AND (L43 OR PHOTOINITIAT? OR AIBN)
L44
L45
        1475613 S OXIDE OR DIOXIDE
            239 S L37 AND L45
L46
         705104 S ?SILICON? OR ?SILOXAN?
L47
L48
            253 S L37 AND L47
L49
              6 S L39 AND L40 AND L42
L50
              5 S L39 AND L40 AND L44
L51
             25 S L39 AND L40 AND L46
             35 S L39 AND L40 AND L47
L52
L53
              0 S L49 AND L50 AND L51 AND L52
L54
              0 S L49 AND L50
              62 S L49-52
L55
             12 S. L55 AND PREP/RL /2 c:+ec
L56
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L57
        92535 S SUNSCREEN OR HAIR OR SHAMPOO OR CONDITIONER OR COSMETIC
L58
           50 S L55 NOT L56
           15 L29 AND L37 l cites

1 S L29 AND L37 l cite - clamed xinker in elected 5p. w/ comp-
L59
L60
L61
         L62
L63
L64
L65
L66
           21 S L66 AND L37
20 S L67 NOT (L56 OR L59 OR L63)
L67
L68
L69
           9 S L68 AND (?IMIDAZOLIUM? OR ?ALLYL?)
L70
            4 S L68 AND (L24 OR L26-29)
            1 S L68 AND ?RADICAL?
L71
           0 S L69 AND L70 AND L71
1 S L69 AND L71 & C.+ e
L72
L73
            9 S L69-70 NOT L73 9 cites
```

note: only part "a" is part "b" components are use wired, c-e can be \$; however there must also be a cross sinker

=> d que 121 SCR 2127 AND 2067 AND 1992 L1STR this is the dially amine component (partia) NODE ATTRIBUTES: DEFAULT MLEVEL IS ATOM DEFAULT ECLEVEL IS LIMITED GRAPH ATTRIBUTES: RING(S) ARE ISOLATED OR EMBEDDED NUMBER OF NODES IS 7 STEREO ATTRIBUTES: NONE 10 part B - neutral or basic mon omli triazine, lactam acry (ales substituted by a vinal group VAR G1=16/5/12 lact am REP G2 = (1-20) C NODE ATTRIBUTES: DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED GRAPH ATTRIBUTES: RSPEC I NUMBER OF NODES IS 17 STEREO ATTRIBUTES: NONE L6 STR Cb @11 Ak @9 this is the N-vingl inidazolium 13 G1 VAR G1=H/9/11 NODE ATTRIBUTES: CONNECT IS X3 RC AT CONNECT IS X3 RC AT CONNECT IS X3 RC AT other part a DEFAULT MLEVEL IS ATOM GGCAT IS MCY UNS AT DEFAULT ECLEVEL IS LIMITED al ternative ECOUNT IS E6 C AT 11 GRAPH ATTRIBUTES: RING(S) ARE ISOLATED OR EMBEDDED NUMBER OF NODES IS 12

STEREO	ATTRIBUTE	ES: 1	NONE				
L12	1844	SEA	FILE=REGISTRY	SSS FUL	L1 AND	(L3 OR L	6) AND L4
L13	102	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	L12 AND	"SULFATE"
L15	20288	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	"IMIDAZ	OLIUM"
L16	177	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	L15 AND	L12
L17	41	SEA	FILE=REGISTRY	ABB=ON	PLU=ON	L16 AND	L13
L21	58	SEA	FILE=HCAPLUS	ABB=ON	PLU=ON	L17	

```
=> d bib abs hitstr 1
    ANSWER 1 OF 16 HCAPLUS COPYRIGHT 2001 ACS 2001:643364 HCAPLUS
L31
AN
ΤI
     Use of stabilized starches in low VOC, polyacrylic acid-containing hair
     cosmetic compositions
     Vitale, Melissa J.; Tolchinsky, Maria; Martino, Gary T.; Solarek, Daniel
IN
     B.; Cottrell, Ian W.
PA
    USA
    U.S. Pat. Appl. Publ., 8 pp., Cont.-in-part of U.S. Ser. No. 57,826,
SO
     abandoned.
     CODEN: USXXCO
DТ
     Patent
LA
    English
FAN.CNT 2
     PATENT NO.
                     KIND DATE
                                           APPLICATION NO. DATE
                                           _____
                                           US 1999-277784 19990329
    US 20010018046 A1 20010830
PΤ
    NO 9901662 A 19991013
                                           NO 1999-1662
                                                            19990408
                                           EP 1999-106172 19990408
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO
     CN 1236607
                     A 19991201
A1 19991021
                                           CN 1999-107275
                                                            19990408
     AU 9923677
                                           AU 1999-23677
                                                            19990409
                      A2 19991207
     JP 11335248
                                           JP 1999-102433 19990409
                     B2
A
                           19980409
PRAI US 1998-57826
     US 1999-277784
                            19990329
    The present invention is directed to a low volatile org. compds. ({\tt VOC}),
     non-aerosol, polyacrylic acid contg. hair cosmetic compns. which contain
     nonionically derivatized starches, particularly those derivatized by
     alkylene oxides. The derivatized starch may be hydrolyzed, particularly
     enzymically hydrolyzed by at least one endo-enzyme. In addn., the starch
     may be cationically modified with a low degree of substitution. Use of
     such starches is novel and advantageous in that they are compatible with
     polyacrylic acid, providing a clear, soln. with a stable viscosity.
     Further, the resultant compn. provides a clear film which is not tacky,
     good stiffness, and improved humidity resistance. A propylene
     oxide-modified starch having a viscosity of 70,000-90,000 cps was prepd.
     A hair gel contained above starch 3.0, Carbopol 0.6, triethanolamine 0.6,
     and water q.s. 95.8%.
TT
     INDEXING IN PROGRESS
IT
    174761-16-1, Polyquaternium-46
     RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
     (Uses)
        (use of stabilized starches in low volatile org. compds. and
        polyacrylic acid-contg. hair cosmetic compns.)
RN
    174761-16-1 HCAPLUS
     1H-Imidazolium, 1-ethenyl-3-methyl-, methyl sulfate, polymer with
     1-ethenylhexahydro-2H-azepin-2-one and 1-ethenyl-2-pyrrolidinone (9CI)
     (CA INDEX NAME)
    CM
         1
     CRN 2235-00-9
    CMF C8 H13 N O
   CH=CH2
    CM
          2
     CRN 88-12-0
```

CMF C6 H9 N O

CRN 26591-72-0 CMF C6 H9 N2 . C H3 O4 S

CRN 45534-45-0 CMF C6 H9 N2



CH: = CH2

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 5

CRN 21228-90-0 CMF C H3 O4 S

Me- 0- SO3-

```
=> d bib abs hitstr 2
L31 ANSWER 2 OF 16 HCAPLUS COPYRIGHT 2001 ACS
     2001:614066 HCAPLUS
     Cosmetic and dermatological sunscreen preparations containing copolymers
     and inorganic UV filters
ΤN
     Hoessel, Peter; Wuensch, Thomas; Dieing, Reinhold
     Basf A.-G., Germany
     Ger. Offen., 18 pp.
     CODEN: GWXXBX
DΤ
     Patent
     German
LA
FAN.CNT 1
     PATENT NO.
                       KIND DATE
                                              APPLICATION NO. DATE
     DE 10007486 A1 20010823
                                            DE 2000-10007486 20000218
PΤ
     The invention concerns sunscreen formulations that contain inorg.
     particles and copolymers that enhance the dispersion of the particles and improve the consistency of the prepn. Copolymers are prepd. by radical
     soln. polymn. of the monomers (a) N-vinylimidazole or diallylamine derivs.
     partially or fully quaternized; (b) neutral or basic water sol. monomer
     that is different from (a); (c) unsatd. acid or anhydride; (d) monomer
     capable of radical polymn. other than (a), (b), (c); (e)
     crosslinker. Polymn. is followed by protonation or quaternization
     in case the monomers were not or only partially quaternized. Inorg. sunscreens are titanium dioxide, zinc oxide, silica, alumina, zirconium
     oxide, manganese oxide, or iron oxide; the pigments are coated with
     siloxanes. Skin and hair sunscreens are formulated using the ingredients.
     Thus a copolymer was prepd. from N-vinylpyrrolidone, 3-methyl-1-
     vinylimidazolium methylsulfate and triallylamine under nitrogen atm. with
     2,2'-azobis(2-amidinopropane)dihydrochloride. The copolymer was used as a
     0.5 wt./wt.% component in a sunscreen cream; further ingredients were
     (wt./wt.%): Ceteareth-6 and stearyl alc. 1.0; Ceteareth-25 2.0; glyceryl stearate 3.0; cetearyl alc. 2.0; cetearyl octanoate 2.0; Uvinul T150 1.0; Uvinul MC80 5.0; Uvinul MBC 95 3.0; zinc oxide 5.0; iso-Pr myristate 7.0;
     D-panthenol 0.5; 1,2-propylene glycol 5.0; xanthan gum (2% in water) 15;
     tocopherol acetate 1.0; preservative q.s.; water ad 100.
     219805-95-5P 219805-96-6P 219805-98-8P
     219805-99-9P
     RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); BIOL
     (Biological study); PREP (Preparation); USES (Uses)
         (cosmetic and dermatol. sunscreen prepns. contg. copolymers and inorg.
         UV filters)
RN
     219805-95-5 HCAPLUS
     CN
     INDEX NAME)
     CM
     CRN 13811-50-2
     CMF C7 H10 N2 O
  CH== CH2
      CH = CH_2
     CM
          2
```

CRN 88-12-0 CMF C6 H9 N O

сн== сн2

CM 2

CRN 88-12-0 CMF C6 H9 N O

CRN 38862-40-7 CMF C7 H11 N2 . C H3 O4 S

CM 4

CRN 45657-58-7 CMF C7 H11 N2

Me 
$$N$$
  $Me$   $CH = CH2$ 

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 5

CRN 21228-90-0 CMF C H3 O4 S

Me- 0- SO3-

RN 219805-98-8 HCAPLUS
CN 1H-Imidazolium, 1-ethenyl-3-methyl-, methyl sulfate, polymer with
1-ethenyl-2-pyrrolidinone and oxybis(2,1-ethanediyloxy-2,1-ethanediyl)
di-2-propenoate (9CI) (CA INDEX NAME)

CM

CRN 17831-71-9 CMF C14 H22 O7

PAGE 1-B

— cн== cн<sub>2</sub>

CM 2

CRN 88-12-0

CMF C6 H9 N O

CM 3

CRN 26591-72-0

CMF C6 H9 N2 . C H3 O4 S

CM 4

CRN 45534-45-0 CMF C6 H9 N2

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 5

CRN 21228-90-0 CMF C H3 O4 S

Me- 0- SO3-

RN 219805-99-9 HCAPLUS

CN 1H-Imidazolium, 1-ethenyl-3-methyl-, methyl sulfate, polymer with N,N-di-2-propenyl-2-propen-1-amine and 1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)

CM 1

CRN 102-70-5 CMF C9 H15 N

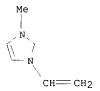
CM 2

CRN 88-12-0 CMF C6 H9 N O

CRN 26591-72-0 CMF C6 H9 N2 . C H3 O4 S

CM 4

CRN 45534-45-0 CMF C6 H9 N2



\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 5

CRN 21228-90-0 CMF C H3 O4 S

Me- O- SO3-

#### => d bib abs hitstr 3 ANSWER 3 OF 16 HCAPLUS COPYRIGHT 2001 ACS 2001:508031 HCAPLUS ΑN 135:97213 DN TΤ Aerosol hair compositions containing nonionically derivatized starches ΙN Paul, Charles W.; Henley, Matthew J.; Altieri, Paul A.; Vitale, Melissa J.; Tolchinsky, Maria; Solarek, Daniel B.; Cottrell, Ian W. PΑ SO U.S. Pat. Appl. Publ., 12 pp., Cont.-in-part of U.S. Ser. No. 57,717, abandoned. CODEN: USXXCO DT Patent English LA FAN.CNT 2 PATENT NO. KIND DATE APPLICATION NO. DATE ----20010712 US 2001007655 A1 US 1999-280614 19990329 NO 9901660 19991011 NO 1999-1660 19990408 Α EP 948958 19990408 A2 19991013 EP 1999-106171 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO CN 1234225 19991110 CN 1999-107306 19990408 Α AU 9923678 19991021 AU 1999-23678 A1 19990409 19991207 JP 11335247 JP 1999-102429 A2 19990409 PRAI US 1998-57717 В2 19980409 US 1999-280614 Α 19990329 The present invention is directed to low volatile org. compd. aerosol hair compns. which contain nonionically derivatized starches optionally hydrolyzed and/or ionically modified. Such compns. provide a clear soln. with a low viscosity, good spray characteristics, a clear, non-tacky film, good stiffness, and improved humidity resistance. Thus, a mousse contained polymer 3.00, Tergitol NP-9 0.60, Dowicil-200 0.20, water 88.20, and propellant A-46 8.00 g. 174761-16-1, Polyquaternium-46 TΤ RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (aerosol hair compns. contg. nonionically derivatized starches) 174761-16-1 HCAPLUS RN ${\tt 1H-Imidazolium,\ 1-ethenyl-3-methyl-,\ methyl\ sulfate,\ polymer\ with}$ CN 1-ethenylhexahydro-2H-azepin-2-one and 1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME) CM 1 CRN 2235-00-9 CMF C8 H13 N O сн == сн2 CM

CRN 88-12-0 CMF C6 H9 N O

CRN 26591-72-0 CMF C6 H9 N2 . C H3 O4 S

CM 4

CRN 45534-45-0 CMF C6 H9 N2

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 5

CRN 21228-90-0 CMF C H3 O4 S

Me-0-803-

```
=> d bib abs hitstr 4
L31 ANSWER 4 OF 16 HCAPLUS COPYRIGHT 2001 ACS
     2001:449806 HCAPLUS
ΑN
DN
     135:66003
ΤI
     Preparation and use of nanoscale polymers for cosmetic and pharmaceutical
     compositions
IN
     Hensen, Hermann; Eggers, Anke; Seipel, Werner
PA
     Cognis Deutschland G.m.b.H., Germany
SO
     Ger. Offen., 14 pp.
     CODEN: GWXXBX
\mathsf{D}\mathbf{T}
     Patent
LA
     German
FAN.CNT 1
     PATENT NO.
                      KIND DATE
                                             APPLICATION NO. DATE
                       _____
                      A1 20010621
     DE 19961277
                                             DE 1999-19961277 19991218
                       A1 20010621
     WO 2001043859
                                             WO 2000-EP12518 20001211
         W: JP, KR, US
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR
PRAI DE 1999-19961277 A 19991218
     The invention concerns the prepn. and use of polymer nanoparticles in
     cosmetic and pharmaceutical surfactant compns., e.g. bath prepns.
     Polymers are anionic, zwitterionic, and non-ionic. Nanoscale polymers are
     prepd. from supercrit. solns. by rapid expansion spraying into a protective colloid-contg. soln. Thus Luviskol VA 64W nanoparticles were
     prepd. from supercrit. carbon dioxide soln. using a laser nozzle and a
     plexi glass expansion chamber contg. 4 % aq. PVA. The Luviskol VA 64W
     nanoparticles were used in a hair rinsing compn. that contained
     (wt./wt.%): Luviskol VAG 4W 0.5; Dehyquart A 2.0; Dehyquart L80 1.2;
     Eumulgin B2 0.8; Lanette O 2.5; Cutina HE 1.0; preservative, water to 100.
ΙT
     150599-70-5, Luviquat Care
     RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
        (prepn. and use of nanoscale polymers for cosmetic and pharmaceutical
        compns.)
RN
     150599-70-5 HCAPLUS
     1H-Imidazolium, 1-ethenyl-3-methyl-, methyl sulfate, polymer with
CN
     1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)
     CRN 88-12-0
     CMF C6 H9 N O
  сн<del>===</del> сн<sub>2</sub>
     CM
          2
     CRN 26591-72-0
     CMF C6 H9 N2 . C H3 O4 S
          CM
               3
          CRN 45534-45-0
          CMF C6 H9 N2
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\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 4

CRN 21228-90-0 CMF C H3 O4 S

Me-0-803-

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=> d bib abs hitstr 5
L31 ANSWER 5 OF 16 HCAPLUS COPYRIGHT 2001 ACS
     2001:279399 HCAPLUS
DN
     134:300613
     A washing composition for keratinous materials based on a surfactant, a
TΙ
     cationic vinyllactam polymer and an acrylic terpolymer
IN
     Maurin, Veronique; Beauquey, Bernard
     L'oreal, Fr.
SO
     Eur. Pat. Appl., 12 pp.
     CODEN: EPXXDW
ידת
     Patent
LA
     French
FAN.CNT 1
                                             APPLICATION NO. DATE
     PATENT NO.
                      KIND DATE
                                             -----
                      A1 20010418
                                             EP 2000-402664 20000926
PT
     EP 1092420
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             TE, SI, LT, LV, FI, RO
353 A1 20010330
233745 A2 20010828
-12171 A 19990929
     FR 2798853
                                             FR 1999-12171
                                                               19990929
                                             JP 2000-336706 20000929
     JP 2001233745
PRAI FR 1999-12171
     A hair wash comprising a surfactant, a cationic vinyllactam polymer and an
     acrylic terpolymer is disclosed (Markush structures given). A shampoo
     contained 30% cocoyl betaine 6, 70% sodium lauryl ether sulfate 16,
     Luviquat FC905 (vinylpyrrolidone-methylvinylimidazolium chloride
     copolymer) 0.75, Structure Plus (an acrylic terpolymer) 1, glycol
     distearate 2, preservatives q.s., and water q.s. 100 g.
     150599-70-5
     RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
     (Uses)
        (washing compn. for keratinous materials based on surfactant, cationic
        vinyllactam polymer and acrylic terpolymer)
     150599-70-5 HCAPLUS
     1H-Imidazolium, 1-ethenyl-3-methyl-, methyl sulfate, polymer with 1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)
     CM
     CRN 88-12-0
     CMF C6 H9 N O
 CH=CH2
     CM
     CRN 26591-72-0
     CMF C6 H9 N2 . C H3 O4 S
          CM
          CRN 45534-45-0
CMF C6 H9 N2
```

Me
$$N$$
 $N$ 
 $CH = CH_2$ 

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 4

CRN 21228-90-0 CMF C H3 O4 S

Me-0-s03-

RE.CNT 4

RE

- (1) Colgate Palmolive Co; WO 9406403 A 1994 HCAPLUS
  (2) Elliott, R; US 5910472 A 1999 HCAPLUS
  (3) Procter & Gamble; WO 9501152 A 1995 HCAPLUS
  (4) Procter & Gamble; WO 9735545 A 1997 HCAPLUS

```
=> d bib abs hitstr 6
L31
     ANSWER 6 OF 16 HCAPLUS COPYRIGHT 2001 ACS
      2000:741868 HCAPLUS
AN
      133:300916
DN
TΙ
      Hair styling composition containing crosslinked silicones
      Pratley, Stuart Keith
IN
     Unilever PLC, UK; Unilever NV; Hindustan Lever Limited PCT Int. Appl., 27 pp.
PA
SO
      CODEN: PIXXD2
DT
      Patent
      English
LA
FAN.CNT 1
      PATENT NO.
                          KIND DATE
                                                  APPLICATION NO. DATE
                                -----
                                                 WO 2000-EP2392 20000317
                         A1
ΡI
     WO 2000061084
                                20001019
          W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU,
               CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,
               MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ,
               BY, KG, KZ, MD, RU, TJ, TM
          RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,
               CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
PRAI GB 1999-7954
     The invention provides hair styling compns., for example creams, gels and esp. aerosol hair styling mousses. The compns. contain a
      crosslinked silicone, such as an emulsion of crosslinked
      dimethiconol gum, and a cationic hair styling polymer having a cationic
      charge d. of at least 1 meq/g. The compns. provide excellent styling as
      well as sensory feel.
      174761-16-1, Polyquaternium 46
IT
      RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
         (hair styling compn. contg. crosslinked silicones)
RN
      174761-16-1 HCAPLUS
      1H-Imidazolium, 1-ethenyl-3-methyl-, methyl sulfate, polymer with
      1-ethenylhexahydro-2H-azepin-2-one and 1-ethenyl-2-pyrrolidinone (9CI)
      (CA INDEX NAME)
      CM
     CRN 2235-00-9
     CMF C8 H13 N O
   сн = сн2
      CM
      CRN 88-12-0
      CMF C6 H9 N O
  CH- CH2
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CM 3 CRN 26591-72-0 CMF  $C6\ H9\ N2$  . C  $H3\ O4\ S$ CM 4 CRN 45534-45-0 CMF C6 H9 N2

сн== сн2

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 5

CRN 21228-90-0 CMF C H3 O4 S

Me- 0- SO3-

RE.CNT 5

RE

- (1) Dow Corning; EP 0445982 A 1991 HCAPLUS (2) Murray, A; US 5776444 A 1998 HCAPLUS (3) Unilever PLC; EP 0818190 A 1998 HCAPLUS (4) Unilever PLC; WO 0021493 A 2000 HCAPLUS (5) Unilever PLC; WO 0033797 A 2000 HCAPLUS

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=> d bib abs hitstr 7
    ANSWER 7 OF 16 HCAPLUS COPYRIGHT 2001 ACS
L31
     2000:593027 HCAPLUS
DN
     133:182720
TΙ
     Hair-conditioning gel
ΙN
     Schroeder, Thomas; Baumscheiper, Michael; Poppe, Elisabeth
PΑ
     Hans Schwarzkopf G.m.b.H. & Co. K.-G., Germany
     Ger. Offen., 10 pp.
     CODEN: GWXXBX
DT
     Patent
LA
     German
FAN.CNT 1
     PATENT NO.
                     KIND DATE
                                          APPLICATION NO. DATE
     DE 19907715
                      A 1
                           20000824
                                          DE 1999-19907715 19990223
PΙ
     WO 2000049999
                     A1 20000831
                                          WO 2000-EP1158 20000212
        W: AU, BR, CA, CN, CZ, HU, JP, KR, MX, NZ, PL, RU, SI, SK, TR, US
         RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
             PT, SE
PRAI DE 1999-19907715 A
                          19990223
    An aq. or aq.-alc. gel prepn. for prodn. of a hair-conditioning foam
     comprises .gtoreq.1 anionic or cationic gelation agent, a propellant, and
     .gtoreq.1 active agent selected from cationic surfactants, cationic
     polymers, silicones, and protein hydrolyzates. The prepn. can be applied
     to the hair without significant overspray onto the scalp or clothing, and
     need not contain a thickening agent. The gelation agent may be an anionic
     synthetic (co)polymer contg. carboxylate or sulfonate groups, or a
     cationic synthetic (co)polymer contg. quaternary ammonium groups. Thus, a
     luster-improving hair fixative foam compn. contained Stabileze QM (maleic
     anhydride/Me vinyl ether copolymer crosslinked with
     1,9-decadiene) 3.0, Dow Corning 1501 3.0, Luviskol VA 73E
     [vinylpyrrolidone/vinyl acetate (70:30) copolymer] 2.5,, EtOH 18.0,
     propane-butane mixt. 4.0, and H2O to 100 wt. parts.
ΤТ
     150599-70-5, Polyquaternium-44
     RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
        (hair-conditioning gel)
     150599-70-5 HCAPLUS
RN
     1H-Imidazolium, 1-ethenyl-3-methyl-, methyl sulfate, polymer with
     1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)
     CM
    CRN 88-12-0
CMF C6 H9 N O
  CH = CH_2
     CRN 26591-72-0
     CMF C6\ H9\ N2 . C\ H3\ O4\ S
          CM
          CRN 45534-45-0
          CMF C6 H9 N2
```

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 4

CRN 21228-90-0 CMF C H3 O4 S

Me-0-s03-

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=> d bib abs hitstr 8
    ANSWER 8 OF 16 HCAPLUS COPYRIGHT 2001 ACS
L31
     2000:259958 HCAPLUS
ΑN
DN
     132:298451
ТĪ
     Hair styling compositions containing silicone and nonionic surfactant
IN
     Pratley, Stuart Keith
     Unilever PLC, UK; Unilever N.V.; Hindustan Lever Limited
PΑ
     PCT Int. Appl., 21 pp.
SO
     CODEN: PIXXD2
DТ
     Patent
LA
     English
FAN.CNT 1
     PATENT NO.
                       KIND DATE
                                             APPLICATION NO. DATE
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PΙ
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             MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK,
             SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY,
             KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,
             CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
     AU 9960900
                       A1
                             20000501
                                             AU 1999-60900
                                                               19990927
     BR 9914447
                             20010703
                                             BR 1999-14447
                                                               19990927
                        Α
                            20010808
     EP 1121089
                       A 1
                                             EP 1999-947470
                                                              19990927
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO
PRAI GB 1998-22419
                             19981014
                      Α
                            19990927
     WO 1999-EP7427
                       W
     Hair styling compns. comprise (i) from 0.1-10%, based on total wt., of a
     non-rigid emulsion polymd. crosslinked silicone polymer, in
     which the percentage of branched monomer units in the silicone polymer is
     0.05-10%, 0.1-10% hair styling polymer, 0.01-5% nonionic surfactant having
     an HLB value of at least 14.5, water, and 0-30% an aerosol propellant.
     The compns. are typically in the form of an aerosol hair styling mousse or
     a hair styling cream or gel and provide excellent style creation as well
     as sensory feel. Thus, a hair styling compn. contained HC Polymer-3A 3,
     crosslinked silicone 3, EtOH 8, Nonion PS-2500 0.3, LPG 8 and
     water to 100%.
     174761-16-1, Polyquaternium 46
ΤТ
     RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
        (hair styling compns. contg. silicone and nonionic surfactant)
RN
     174761-16-1 HCAPLUS
     1H-Imidazolium, 1-ethenyl-3-methyl-, methyl sulfate, polymer with
     1-ethenylhexahydro-2H-azepin-2-one and 1-ethenyl-2-pyrrolidinone (9CI)
     (CA INDEX NAME)
     CRN 2235-00-9
     CMF C8 H13 N O
  CH== CH2
     CM
```

CRN 88-12-0

CMF C6 H9 N O

 $CH==CH_2$ N. . . O

CM 3

CRN 26591-72-0 CMF C6 H9 N2 . C H3 O4 S

CM 4

CRN 45534-45-0 CMF C6 H9 N2



\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 5

CRN 21228-90-0 CMF C H3 O4 S

Me- 0- SO3-

RE.CNT 4

RE

- (1) Dow Corning Corp; EP 0445982 A 1991 HCAPLUS
  (2) Unilever, P; WO 9631188 A 1996 HCAPLUS
  (3) Unilever, P; EP 0818190 A 1998 HCAPLUS
  (4) Unilever, P; WO 9813011 A 1998 HCAPLUS

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=> d bib abs hitstr 9
    ANSWER 9 OF 16 HCAPLUS COPYRIGHT 2001 ACS
L31
     2000:65519 HCAPLUS
ΑN
DN
     132:123063
     Manufacture of cationically crosslinked polymer powders
TΙ
     Hildebrandt, Volker; Dieing, Reinhold; Zeitz, Katrin
IN
PA
     BASF A.-G., Germany
     Ger. Offen., 8 pp.
     CODEN: GWXXBX
DT
     Patent
LA
    German
FAN.CNT 1
     PATENT NO.
                     KIND DATE
                                          APPLICATION NO. DATE
                            20000<u>127</u>
    DE 19833287
                      A1
                                          DE 1998-19833287 19980724
     WO 2000005274
                     A1 20000203
                                          WO 1999-EP4868 19990712
            CA, CN, JP, US
         RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
             PT, SE
     EP 1117696
                      A1 20010725
                                          EP 1999-932863 19990712
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, FI
PRAI DE 1998-19833287
                           19980724
     WO 1999-EP4868
                      W
                          19990712
     The title polymers, useful as additives in pharmaceutical and cosmetic
     formulations, are manufd. by radical polymn. of monoethylenically unsatd.
     monomers contg. quaternized or quaternizable N atoms in supercrit. CO2 at
     temps. 31-150.degree. and pressures >73 bar, esp. 120-250 bar. For
     example, introducing a mixt. of N-methyl-N-vinylimidazolium methosulfate,
     triallylamine and N-vinylpyrrolidone into a stirred reactor contg.
     supercrit. CO2 and stirring the whole for 10 h at 160 bar and 60.degree.
     gave the copolymer as a flowable white powder comprising particles of
     10-500 .mu.m.
     219805-99-9P, N-Methyl-N-vinylimidazolium methosulfate-
     Triallylamine-N-Vinylpyrrolidone copolymer 256326-18-8P, N,N'-
     Divinylethyleneurea-N-Methyl-N-vinylimidazolium
     methosulfate-N-Vinylcaprolactam-N-Vinylpyrrolidone copolymer
     RL: IMF (Industrial manufacture); PREP (Preparation)
        (manuf. of cationically crosslinked polymer powders by
        radical polymn. of monomers in supercrit. carbon dioxide)
RN
     219805-99-9 HCAPLUS
     1H-Imidazolium, 1-ethenyl-3-methyl-, methyl sulfate, polymer with
     N, N-di-2-propenyl-2-propen-1-amine and 1-ethenyl-2-pyrrolidinone (9CI)
     (CA INDEX NAME)
     CM
         1
     CRN 102-70-5
     CMF C9 H15 N
              CH_2-CH=-CH_2
H2C = CH - CH2 - N - CH2 - CH = CH2
     CM
     CRN 88-12-0
     CMF C6 H9 N O
```

CRN 2235-00-9 CMF C8 H13 N O

CRN 88-12-0 CMF C6 H9 N O

CM

CRN 26591-72-0 CMF C6 H9 N2 . C H3 O4 S

CM 5

CRN 45534-45-0 CMF C6 H9 N2

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CRN 21228-90-0 CMF C H3 O4 S

Me-0-803-

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=> d bib abs hitstr 10
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     1999:659023 HCAPLUS
ΑN
DN
     131:291034
ТT
     Nonionically derivatized starches and their use in non-aerosol, low
     volatile organic compound hair fixative compositions
     Vitale, Melissa J.; Tolchinsky, Maria; Martino, Gary T.; Solarek, Daniel
     B.; Cottrell, Ian W.
     National Starch and Chemical Investment Holding Corporation, USA
PΑ
SO
     Eur. Pat. Appl., 15 pp.
     CODEN: EPXXDW
DT
     Patent
     English
LA
FAN.CNT 1
     PATENT NO.
                      KIND DATE
                                             APPLICATION NO. DATE
     A2 19991013
                                            EP 1999-106173
                                                              19990408
     EP 948960
        R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO
     NO 9901661
                             19991011
                                             NO 1999-1661
                                                               19990408
                       A2 19991124
     JP 11322552
                                             JP 1999-100994
                                                              19990408
     CN 1246328
                       Α
                             20000308
                                             CN 1999-107271
                                                               19990408
                           19991021
     AU 9923676
                                             AU 1999-23676
                                                               19990409
                       A1
PRAI US 1998-57825
                             19980409
                       Α
                      A
     US 1999-280734
                             19990329
     The present invention is directed to low VOC, non-aerosol hair cosmetic
     compns., which contain nonionically modified starches. The starch may be addnl. hydrolyzed particularly enzymically hydrolyzed. Further, the
     starch may be modified using ionic substituents. Use of such starches is
     novel and advantageous in that they provide a clear soln. with a low
     viscosity, and good pump spray characteristics. Further, the resultant
     compn. provides a clear film which is not tacky, good stiffness, and improved humidity resistance. A soln. of 5 g PVP in 900 of water was
     added to 100 amylose corn starch which was modified by propylene oxide and
     neutralized. The slurry was heated at 150-155.degree. and spray dried.
     Hair spray soln. contg. the above modified starch 5 and water 95% was
     prepd.
ΙT
     174761-16-1, Polyquaternium 46
     RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
        (nonionically derivatized starches and their use in non-aerosol, low
        volatile org. compd. hair fixative compns.)
     174761-16-1 HCAPLUS
RN
     1H-Imidazolium, 1-ethenyl-3-methyl-, methyl sulfate, polymer with
     1-ethenylhexahydro-2H-azepin-2-one and 1-ethenyl-2-pyrrolidinone (9CI)
     (CA INDEX NAME)
     CM
     CRN 2235-00-9
     CMF C8 H13 N O
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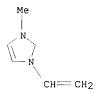


CRN 88-12-0 CMF C6 H9 N O

CRN 26591-72-0 CMF C6 H9 N2 . C H3 O4 S

CM 4

CRN 45534-45-0 CMF C6 H9 N2



\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 5

CRN 21228-90-0 CMF C H3 O4 S

Me-0-803-

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=> d bib abs hitstr 11
    ANSWER 11 OF 16 HCAPLUS COPYRIGHT 2001 ACS
AN
     1999:659022 HCAPLUS
     131:276764
DN
     Nonionically derivatized starches and their use in low VOC, polyacrylic
TT
     acid-containing hair fixative compositions
     Vitale, Melissa J.; Tolchinsky, Maria; Martino, Gary T.; Solarek, Daniel
     B.; Cottrell, Ian W.
     National Starch and Chemical Investment Holding Corporation, USA
PΑ
SO
     Eur. Pat. Appl., 10 pp.
     CODEN: EPXXDW
DT
     Patent
     English
LA
FAN.CNT 2
                       KIND DATE
     PATENT NO.
                                             APPLICATION NO. DATE
      ----
                             -----
                       A2 19991013
                                             EP 1999-106172 19990408
     EP 948959
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO
                             20010830
                                             US 1999-277784 19990329
     US 20010018046
                      A1
PRAI US 1998-57826
                        Α
                             19980409
     US 1999-277784
                       Α
                             19990329
     A low VOC, non-aerosol, polyacrylic acid-contg. hair cosmetic compns.
     which contain nonionically derivatized starches, particularly those
     derivatized by alkylene oxides are disclosed. The derivatized starch may
     be hydrolyzed, particularly enzymically hydrolyzed by at least one
     endo-enzyme. In addn., the starch may be acid cationically modified with a low degree of substitution. Use of such starches is novel and
     advantageous in that they are compatible with polyacrylic acid, providing
     a clear, soln. with a stable viscosity. Further, the resultant compn.
     provides a clear film which is not tacky, good stiffness, and improved
     humidity resistance. A 40% soln. of starch modified with propylene oxide was treated with 2.5% 3-chloro-2-hydroxypropyltrimethyl ammonium chloride
     followed by adjustment of pH to 5.5 and heating until fully gelatinized,
     cooled, filtered, and neutralized by 2-amino-2-methyl-1-propanol. A hair
     gel contained above starch 3.0, Carbopol 0.6, triethanolamine 0.6, and
     water 95.8%.
     174761-16-1, Polyquaternium 46
     RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
        (nonionically derivatized starches and their use in low volatile org.
        compd., polyacrylic acid-contg. hair fixative compns.)
RN
     174761-16-1 HCAPLUS
     1H-Imidazolium, 1-ethenyl-3-methyl-, methyl sulfate, polymer with
CN
     1-ethenylhexahydro-2H-azepin-2-one and 1-ethenyl-2-pyrrolidinone (9CI)
     (CA INDEX NAME)
     СМ
          1
     CRN 2235-00-9
     CMF C8 H13 N O
   сн==сн2
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CRN 88-12-0 CMF C6 H9 N O

CRN 26591-72-0 CMF C6 H9 N2 . C H3 O4 S

CM 4

CRN 45534-45-0 CMF C6 H9 N2



\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 5

CRN 21228-90-0 CMF C H3 O4 S

Me-0-S03-

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=> d bib abs hitstr 12
L31 ANSWER 12 OF 16 HCAPLUS COPYRIGHT 2001 ACS
AN
     1999:659021 HCAPLUS
DN
     131:291033
ТT
     Non-ionically derivatized starches and their use in aerosol hair fixative
     compositions
     Paul, Charles W.; Henley, Matthew J.; Altieri, Paul A.; Vitale, Melissa J.; Tolchinsky, Maria; Solarek, Daniel B.; Cottrell, Ian W.
     National Starch and Chemical Investment Holding Corporation, USA
PΑ
SO
     Eur. Pat. Appl., 17 pp.
     CODEN: EPXXDW
DT
     Patent
LA
     English
FAN.CNT 2
     PATENT NO.
                        KIND DATE
                                                APPLICATION NO. DATE
      ______
                         A2 19991013
     EP 948958
                                                EP 1999-106171 19990408
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
              IE, SI, LT, LV, FI, RO
                       A1 20010712
     US 2001007655
                                                US 1999-280614 19990329
                         A 19980409
PRAI US 1998-57717
     US 1999-280614
                               19990329
                         Α
     Low volatile org. compd. aerosol hair cosmetic compns. which contain
     nonionically derivatized starches optionally hydrolyzed and/or ionically modified are disclosed. Such compns. provide a clear soln. with a low
     viscosity, good spray characteristics, a clear, non-tacky film, good
     stiffness, and improved humidity resistance. A 40% aq. soln. of waxy starch was prepd. and mixed with 25% sodium sulfate soln., the pH was then
     adjusted to 11.5. The mixt. was treated with 7.5% propylene oxide and the
     pH was adjusted to 5.5. A soln. of 5 g PVP in 900 g of water was added to
     100 g of starch soln. and heated at 150-155.degree., then spray dried and
     neutralized with 2-amino-2-methyl-1-propanol. A hair spray soln. contained above starch 7.5, di-Me ether 5, propellant 33 and water 62%.
TΤ
     174761-16-1, Polyquaternium 46
     RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
         (non-ionically derivatized starches and their use in aerosol hair
         fixative compns.)
     174761-16-1 HCAPLUS
RN
     1H-Imidazolium, 1-ethenyl-3-methyl-, methyl sulfate, polymer with
     1-ethenylhexahydro-2H-azepin-2-one and 1-ethenyl-2-pyrrolidinone (9CI)
     (CA INDEX NAME)
     CM
     CRN 2235-00-9
     CMF C8 H13 N O
   CH=CH2
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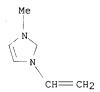
CRN 88-12-0 CMF C6 H9 N O

CM

CRN 26591-72-0 CMF C6 H9 N2 . C H3 O4 S

CM 4

CRN 45534-45-0 CMF C6 H9 N2



\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 5

CRN 21228-90-0 CMF C H3 O4 S

Me-0-s03-

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=> d bib abs hitstr 13
L31 ANSWER 13 OF 16 HCAPLUS COPYRIGHT 2001 ACS
     1999:330560 HCAPLUS
ΑN
     130:356891
DN
ΤI
     Propellant-free cosmetic pump hair sprays and pump foams
     Schehlmann, Volker; Hoessel, Peter
ΤN
PA
     BASF A.-G., Germany
so
     Ger. Offen., 14 pp.
     CODEN: GWXXBX
DТ
     Patent
     German
T.A
FAN.CNT 1
     PATENT NO.
                       KIND DATE
                                              APPLICATION NO. DATE
ΡI
     DE 19750520
                        Α1
                              19990520
                                              DE 1997-19750520 19971114
                                              WO 1998-EP7027 19981104
     WO 9925311
                        A1 19990527
         W: JP, US
          RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
              PT, SE
                        A1 20000823
     EP 1028700
                                              EP 1998-959839 19981104
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI
PRAI DE 1997-19750520 A 19971114
WO 1998-EP7027 W 19981104
     {\tt Hair-conditioning\ and\ -setting\ prepns.\ which\ are\ sprayable\ without\ use\ of}
     a propellant are provided which contain .gtoreq.1 cationic and .gtoreq.1
     anionic polymer in an aq., alc., or aq.-alc. solvent. Suitable cationic
     polymers include (quaternized) vinylpyrrolidone/dialkylaminoalkyl
     (meth) acrylates, quaternary ammonium group-contg. cellulose ethers,
     cationic polysaccharides, (crosslinked) polyamino-polyamides, reaction products of polyalkylenepolyamines with dicarboxylic acids, and
     ionene polymers. The anionic polymers may be carboxylated or sulfonated
     vinyl polymers, esp. (meth)acrylic acid homo- or copolymers. These
     polymer combinations are also useful in formulation of nonsticky leave-on
     hair-conditioning lotions or gels. Thus, a pump spray formulation contained Luvimer MAE 30D [methacrylic acid/Et acrylate (50:50) copolymer]
     3.33, 2-amino-2-methyl-1-propanol \bar{0}.26, Polyquaternium 44 1.25, Cremophor
     A 25 0.50, Tego-Betaine L7 1.00, Cremophor RH 40 0.70, perfume oil 0.20,
     preservative 0.10, and H2O to 100.00 g.
     150599-70-5, Polyquaternium 44 174761-16-1,
     Polyquaternium 46
     RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
     (Uses)
         (propellant-free cosmetic pump hair sprays and pump foams)
RN
     150599-70-5 HCAPLUS
     1H-Imidazolium, 1-ethenyl-3-methyl-, methyl sulfate, polymer with
CN
     1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)
     CM
     CRN 88-12-0
     CMF C6 H9 N O
  сн==сн2
     CM
     CRN
          26591-72-0
     CMF C6 H9 N2 . C H3 O4 S
          CM
                3
```

CRN 45534-45-0 CMF C6 H9 N2

```
Me
N
N
CH== CH<sub>2</sub>
```

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 4

CRN 21228-90-0 CMF C H3 O4 S

Me-0-503-

RN 174761-16-1 HCAPLUS
CN 1H-Imidazolium, 1-ethenyl-3-methyl-, methyl sulfate, polymer with 1-ethenylhexahydro-2H-azepin-2-one and 1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)

CM

CRN 2235-00-9 CMF C8 H13 N O

CM 2

CRN 88-12-0 CMF C6 H9 N O

CM 3

CRN 26591-72-0 CMF C6 H9 N2 . C H3 O4 S

CM 4

CRN 45534-45-0 CMF C6 H9 N2 Me N N CH=CH<sub>2</sub>

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 5

CRN 21228-90-0 CMF C H3 O4 S

Me- O- SO3-

```
=> d bib abs hitstr 14
L31 ANSWER 14 OF 16 HCAPLUS COPYRIGHT 2001 ACS
     1999:90374 HCAPLUS
ΑN
DN
     130:129757
ТΙ
     Cationic copolymers of high molecular weight for use in hair conditioners
     Dieing, Reinhold; Hoessel, Peter; Kothrade, Stephan; Sanner, Axel; Zeitz,
     Katrin; Raubenheimer, Hans-Juergen; Schehlmann, Volker
     BASF Aktiengesellschaft, Germany
PA
SO
     Eur. Pat. Appl., 12 pp.
     CODEN: EPXXDW
     Patent
LA
     German
FAN.CNT 1
     PATENT NO.
                        KIND DATE
                                               APPLICATION NO. DATE
                        ----
                               -----
                                                -----
                      <u>A</u>2
                               199<u>90127</u>
                                               EP 1998-112651 19980708
                        A3 20000112
     EP 893117
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
              IE, SI, LT, LV, FI, RO
                     A1 19990128
A2 19990323
     DE 19731764
                                                DE 1997-19731764 19970724
     JP 11079957
                                                JP 1998-206335 19980722
                         A 19990310
19970724
     CN 1209991
                                                CN 1998-117533 19980724
PRAI DE 1997-19731764
     Radical-initiated copolymn. of (a) a cationic or quaternizable monomer
     1-99.99, (b) a water-sol. monomer 0-98.99, (c) an addnl.
     radical-polymerizable monomer 0-50, and a bi- or polyfunctional
     radical-polymerizable monomer 0.01-10 wt.%, followed [in case (a) is not
     quaternized] by quaternization, results in formation of
     crosslinked polymers which, when added to shampoos, show excellent conditioning properties without a build-up effect. Thus, aq. solhs. of 3-methyl-1-vinylimidazolium chloride, N-vinylpyrrolidone, N,N'-divinylethyleneurea, and 2,2'-azobis(2-amidinopropane)-2HCI
     (initiator) were slowly combined at 60.degree. under N2 to produce a
     colorless, highly viscous polymer soln. After use of a shampoo contg.
     this polymer 0.1, Na lauryl ether sulfate 10.0, coco amidopropylbetaine
     4.0, and water to 100%, the hair showed very good foaming properties and a
     decrease in wet combing force of 47% compared to a control shampoo.
     219805-95-5P 219805-96-6P 219805-97-7P
     219805-98-8P 219805-99-9P 219806-00-5P
     RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses)
         (cationic copolymers of high mol. wt. for use in hair conditioners)
RN
     219805-95-5 HCAPLUS
     1H-Imidazolium, 1-ethenyl-3-methyl-, methyl sulfate, polymer with
     1,3-diethenyl-2-imidazolidinone and 1-ethenyl-2-pyrrolidinone (9CI) (CA
     INDEX NAME)
     CM
     CRN 13811-50-2
     CMF C7 H10 N2 O
  CH== CH2
      CH = CH_2
     CM
     CRN 88-12-0
```

CMF C6 H9 N O

CRN 88-12-0 CMF C6 H9 N O

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 5

 $CH = CH_2$ 

CRN 21228-90-0 CMF C H3 O4 S

Me-0-503-

RN 219805-98-8 HCAPLUS
CN 1H-Imidazolium, 1-ethenyl-3-methyl-, methyl sulfate, polymer with
 1-ethenyl-2-pyrrolidinone and oxybis(2,1-ethanediyloxy-2,1-ethanediyl)
 di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 17831-71-9 CMF C14 H22 O7

PAGE 1-B

— сн== сн<sub>2</sub>

CM 2

CRN 88-12-0 CMF C6 H9 N O

CH== CH<sub>2</sub>

CM 3

CRN 26591-72-0

CMF C6 H9 N2 . C H3 O4 S

CM 4

CRN 45534-45-0 CMF C6 H9 N2

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 5

CRN 21228-90-0 CMF C H3 O4 S

Me-0-503-

RN 219805-99-9 HCAPLUS
CN 1H-Imidazolium, 1-ethenyl-3-methyl-, methyl sulfate, polymer with
N,N-di-2-propenyl-2-propen-1-amine and 1-ethenyl-2-pyrrolidinone (9CI)
(CA INDEX NAME)

CM 1

CRN 102-70-5 CMF C9 H15 N

 $\begin{array}{c} {\rm CH_2-CH} = {\rm CH_2} \\ | \\ {\rm H_2C} = {\rm CH-CH_2-N-CH_2-CH} = {\rm CH_2} \end{array}$ 

CM 2

CRN 88-12-0 CMF C6 H9 N O

CRN 26591-72-0

CMF C6 H9 N2 . C H3 O4 S

CM 4

CRN 45534-45-0 CMF C6 H9 N2

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 5

CRN 21228-90-0 CMF C H3 O4 S

Me-0-803-

RN 219806-00-5 HCAPLUS

11-Imidazolium, 1-ethenyl-3-methyl-, methyl sulfate, polymer with 1-ethenyl-2-pyrrolidinone and 3-(2-propenyloxy)-2,2-bis[(2-propenyloxy)methyl]-1-propanol (9CI) (CA INDEX NAME)

CM 1

CRN 1471-17-6 CMF C14 H24 O4

$$\begin{array}{c} \text{CH}_2-\text{OH} \\ | \\ \text{H}_2\text{C} = \text{CH}-\text{CH}_2-\text{O}-\text{CH}_2-\text{C}-\text{CH}_2-\text{O}-\text{CH}_2-\text{CH}=-\text{CH}_2} \\ | \\ \text{CH}_2-\text{O}-\text{CH}_2-\text{CH}==\text{CH}_2 \end{array}$$

CM 2

CRN 88-12-0 CMF C6 H9 N O

CRN 26591-72-0 CMF C6 H9 N2 . C H3 O4 S

CM 4

CRN 45534-45-0 CMF C6 H9 N2

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CRN 21228-90-0 CMF C H3 O4 S

Me- 0- SO3-

```
=> d bib abs hitstr 15
L31 ANSWER 15 OF 16 HCAPLUS COPYRIGHT 2001 ACS
     1998:65841 HCAPLUS
ΑN
DN
     128:141705
ΤТ
      Cationically charge-modified membranes and manufacture thereof
     Wang, I-Fan; Zepf, Robert
IN
PΑ
     Memtec America Corp., USA; Wang, I-Fan; Zepf, Robert
     PCT Int. Appl., 31 pp.
SO
     CODEN: PIXXD2
DТ
     Patent
     English
LA
FAN.CNT 1
     PATENT NO.
                        KIND DATE
                                                APPLICATION NO. DATE
                               -----
PΙ
     WO 9801208
                         A1
                              19980115
                                                WO 1997-US11820 19970708
          W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE,
              DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT,
              RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN,
              AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
          RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR,
              GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG
                       A1 19980202
A1 19990818
     AU 9736530
                                                AU 1997-36530
                                                                   19970708
                                                EP 1997-933314 19970708
     EP 935494
          R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
              IE, FI
     US 6045694
                               20000404
                                                US 1997-889351
                                                                   19970708
     EP 1038570
                         A1 20000927
                                                EP 2000-102545
                                                                  19970708
          R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
              IE, FI
     JP 2000515062
                         Т2
                               20001114
                                                JP 1998-505312
                                                                   19970708
                                                EP 2001-111754
     EP 1121972
                         Α2
                               20010808
                                                                   19970708
                         A3 20010816
     EP 1121972
          R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
              IE, FI
PRAI US 1996-21369
                         Р
                               19960708
     EP 1997-933314
                         A3
                               19970708
     EP 2000-102545
                         A3 19970708
     WO 1997-US11820
                        W
                               19970708
     The title membranes are hydrophobic membranes that are treated with one or
     more polymeric wetting agents to render the membranes substantially
     hydrophilic, followed by treatment with one or more charge-modifying
     agents, the agents causing the membranes to possess a fixed formal pos.
              A cationic membrane may be cast from a mixed polymer soln.
     charge.
     comprising a sulfone polymer and a copolymer of vinylpyrrolidone and a
     cationic imidazolinium compd., and quenching the film in an aq. bath to produce a coagulated membrane, then further cationically charge-modified
     with one or more charge-modifying agents. Microporous melt blown polymer membranes were treated with a soln. of hydroxypropyl cellulose for hydrophilicity then with a soln. of hydroxyethylated polyethylenimine and
     Kymene 450.
     150599-70-5
TΤ
     RL: PEP (Physical, engineering or chemical process); POF (Polymer in
     formulation); TEM (Technical or engineered material use); PROC (Process);
     USES (Uses)
         (cationically charge-modified membranes and manuf. thereof)
     150599-70-5 HCAPLUS
RN
     1H-Imidazolium, 1-ethenyl-3-methyl-, methyl sulfate, polymer with
     1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)
     CM
     CRN 88-12-0
     CMF C6 H9 N O
```

CRN 26591-72-0 CMF C6 H9 N2 . C H3 O4 S

CM 3

CRN 45534-45-0 CMF C6 H9 N2



\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CRN 21228-90-0 CMF C H3 O4 S

Me-- O-- SO3-

```
L31 ANSWER 16 OF 16 HCAPLUS COPYRIGHT 2001 ACS
     1987:497294 HCAPLUS
ΔNJ
DN
     107:97294
ΤI
     Polymers self-crosslinkable in the presence of base catalysts
     National Starch and Chemical Corp., USA
PA
     Jpn. Kokai Tokkyo Koho, 17 pp.
SO
     CODEN: JKXXAF
DT
     Patent
LA
     Japanese
FAN.CNT 1
     PATENT NO.
                                              APPLICATION NO. DATE
                       KIND DATE
                              _____
                       ----
                                              _____
PΤ
     JP 62036409
                        A2
                              19870217
                                              JP 1986-185386 19860808
     JP 05055526
                        B4
                              19930817
                            19870311
     EP 213317
                        A2
                                              EP 1986-108955
                                                                19860701
                              19890405
     EP 213317
                        A3
     EP 213317
                        В1
                             19911204
         R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE
                       E 19911215
     AT 70072
                                              AT 1986-108955
                                                                19860701
     US 4788267
                              19881129
                                              US 1987-13151
                                                                 19870210
                        Α
                              19891219
                                              US 1988-271508
                                                                19880831
     US 4888250
                        Α
PRAI US 1985-764165
                              19850809
     EP 1986-108955
                              19860701
     US 1987-13151
                              19870210
     Polymers prepd. from an unsatd. halohydrin .gtoreq.1, an unsatd. secondary
AB
     or tertiary amine .gtoreq.1, and a vinyl compd. 0-98 \text{ mol}\$ are
     crosslinkable in presence of alkali at a temp. lower than the
     crosslinking temp. of a polymer without the amine, have low-temp.
     hardening and self-crosslinking properties, and are useful in prepg. coatings, binders, adhesives, etc. Thus, a mixt. of
     dimethyldiallylammonium chloride 1.50, 3-chloro-2-hydroxypropyl acrylate
     0.3, dimethylaminopropylmethacrylamide-HCl 0.2 mol in presence of ammonium
     persulfate was polymd. in water soln. and adjusted to pH 5.0-5.5 with 10%
     aq. NaOH to give a soln. having polymer content 38%, stable at room-temp. for 6 mo, and gelled within 165 min after adjusted to pH 9.5 with 10%
     naOH.
IT
     110083-85-7P, 3-Chloro-2-hydroxypropyl methacrylate-
     dimethyldiallylammonium chloride-N-isopropylaminopropyl methacrylamide
     sulfuric acid salt copolymer
     RL: PREP (Preparation)
        ({\tt manuf.\ of\ self-crosslinking})
RN
     110083-85-7 HCAPLUS
     2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, polymer with
     3-chloro-2-hydroxypropyl 2-methyl-2-propenoate and 2-methyl-N-[3-[(1-
     methylethyl)amino]propyl]-2-propenamide sulfate (2:1) (9CI) (CA INDEX
     NAME)
     CM
     CRN 13159-52-9
     CMF C7 H11 C1 O3
       OH
                   O CH<sub>2</sub>
C1CH_2 - CH - CH_2 - O - C - C - Me
```

=> d bib abs hitstr 16

CM 2
CRN 7398-69-8
CMF C8 H16 N . C1

$$\begin{array}{c} \text{Me} \\ | \\ | \\ \text{H}_2\text{C} == \text{CH} - \text{CH}_2 - \text{N} \xrightarrow{+} \text{CH}_2 - \text{CH} == \text{CH}_2 \\ | \\ \text{Me} \end{array}$$

• c1-

CM 3

CRN 110083-84-6 CMF C10 H20 N2 O . 1/2 H2 O4 S

CM 4

CRN 63949-17-7 CMF C10 H20 N2 O

$$\begin{array}{c} \text{O} \quad \text{CH}_2 \\ \parallel \quad \parallel \\ \text{i-PrNH- (CH}_2) \, \text{3-NH-C-C-Me} \end{array}$$

CM 5

CRN 7664-93-9 CMF H2 O4 S

## LAMM 09/771,595

```
=> d bib abs hitstr 1
L56 ANSWER 1 OF 12 HCAPLUS COPYRIGHT 2001 ACS
     2001:614066 HCAPLUS
     Cosmetic and dermatological sunscreen preparations containing copolymers
TΙ
     and inorganic UV filters
     Hoessel, Peter; Wuensch, Thomas; Dieing, Reinhold
ΤN
     Basf A.-G., Germany
PA
SO
     Ger. Offen., 18 pp.
     CODEN: GWXXBX
DT
     Patent
LA
     German
FAN.CNT 1
                        KIND DATE
                                               APPLICATION NO. DATE
     PATENT NO.
     DE 10007486 A1 20010823
                                            DE 2000-10007486 20000218
PΤ
     The invention concerns sunscreen formulations that contain inorg
AB
     particles and copolymers that enhance the dispersion of the particles and
     improve the consistency of the prepn. Copolymers are prepd. by radical
     soln. polymn. of the monomers (a) N-vinylimidazole or diallylamine derivs.
     partially or fully quaternized; (b) neutral or basic water sol.
     monomer that is different from (a); (c) unsatd. acid
     or anhydride; (d) monomer capable of radical polymn. other than
     (a), (b), (c); (e) crosslinker. Polymn. is followed by protonation or quaternization in case the monomers were not or
     only partially quaternized. Inorg. sunscreens are titanium dioxide, zinc oxide, silica, alumina, zirconium
     oxide, manganese oxide, or iron oxide; the
     pigments are coated with siloxanes. Skin and hair sunscreens are formulated using the ingredients. Thus a copolymer was prepd. from
     N-vinylpyrrolidone, \ 3-methyl-1-vinylimidazolium \ methylsulfate \ and
     triallylamine under nitrogen atm. with 2,2'-azobis(2-
     amidinopropane)dihydrochloride. The copolymer was used as a 0.5 wt./wt.% component in a sunscreen cream; further ingredients were (wt./wt.%):
     Ceteareth-6 and stearyl alc. 1.0; Ceteareth-25 2.0; glyceryl stearate 3.0;
     cetearyl alc. 2.0; cetearyl octanoate 2.0; Uvinul T150 1.0; Uvinul MC80
     5.0; Uvinul MBC 95 3.0; zinc oxide 5.0; iso-Pr myristate 7.0;
     D-panthenol 0.5; 1,2-propylene glycol 5.0; xanthan gum (2% in water) 15;
     tocopherol acetate 1.0; preservative q.s.; water ad 100.
     219805-93-3P
     RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); BIOL
     (Biological study); PREP (Preparation); USES (Uses)
         (cosmetic and dermatol. sunscreen prepns. contg. copolymers and inorg.
        UV filters)
RN
     219805-93-3 HCAPLUS
     2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, polymer with
     1,3-diethenyl-2-imidazolidinone and 1-ethenyl-2-pyrrolidinone (9CI) (CA
     INDEX NAME)
     CM
          1
     CRN 13811-50-2
     CMF C7 H10 N2 O
  CH = CH_2
      сн== сн₂
     CM
           2
     CRN 7398-69-8
     CMF C8 H16 N . C1
```

$$\begin{array}{c} \text{Me} & \\ | \\ \text{H}_2\text{C} == \text{CH} - \text{CH}_2 - \text{N}^+ \quad \text{CH}_2 - \text{CH} == \text{CH}_2 \\ | \\ \text{Me} \end{array}$$

• c1-

CM 3

CRN 88-12-0 CMF C6 H9 N O

```
=> d bib abs hitstr 2
L56 ANSWER 2 OF 12 HCAPLUS COPYRIGHT 2001 ACS
     2001:63835 HCAPLUS
AN
DN
     134:131954
TΙ
     Fat-binding polymers for use with lipase inhibitors
     Jozefiak, Thomas Henry; Mandeville, W. Harry, III; Holmes-Farley, Stephen
     Randall; Huval, Chad Cori; Garigapati, Venkata R.; Shackett, Keith K.;
     Concagh, Danny
     Geltex Pharmaceuticals, Inc., USA
PΑ
SO
     PCT Int. Appl., 104 pp.
     CODEN: PIXXD2
DT
     Patent
LA
     English
FAN.CNT 1
     PATENT NO.
                        KIND DATE
                                               APPLICATION NO. DATE
      _____ ___
                               20010125
                                               WO 1999-US15958 19990714
     WO 2001005408
                         A1
         W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ,
              DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS,
              JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK,
              MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD,
              RU, TJ, TM
         RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
                        A1 20010205
                                               AU 1999-49957
     AU 9949957
PRAI WO 1999-US15958
                        Α
                              19990714
     Polymers having ether and(or) N-contg. side chains are manufd. for use in
     binding fat for treatment of obesity. A typical polymer was manufd. by radical polymn. of N-decylacrylamide 2.83, 3-acrylamidopropyltrimethylammo
     nium chloride 18.45, and acrylamide 13.33 g.
     34447-60-4P, Acrylamide-diallylammonium chloride copolymer
TΥ
     53694-17-0P, Acrylic acid-diallyldimethylammonium chloride
     copolymer 68240-11-9P, Acrylamide-diallylmethylamine
     hydrochloride copolymer 165957-71-1P, Acrylamide-3-methyl-1-
     vinylimidazolium chloride copolymer 321903-91-7P,
     Acrylamide-N-dodecylacrylamide-3-methyl-1-vinylimidazolium chloride
     copolymer 321904-01-2P, Diallyldimethylammonium
     chloride-polyethylene glycol acrylate methyl ether graft copolymer
     321936-97-4P, Diallyldimethylammonium chloride-polypropylene
     glycol acrylate methyl ether graft copolymer
     RL: IMF (Industrial manufacture); PRP (Properties); PREP
     (Preparation)
         (fat-binding polymers for use with lipase inhibitors)
RN
     34447-60-4 HCAPLUS
     2-Propenamide, polymer with N-2-propenyl-2-propen-1-amine hydrochloride
     (9CI) (CA INDEX NAME)
     CM
         1
     CRN 6147-66-6
     CMF C6 H11 N . Cl H
H2C== CH- CH2- NH- CH2- CH== CH2
             ● HCl
     CM
     CRN 79-06-1
```

CMF C3 H5 N O

$$_{||}^{O}$$
 $_{||}^{H_{2}N-C-CH}=CH_{2}$ 

53694-17-0 HCAPLUS 2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, polymer with 2-propenoic acid (9CI) (CA INDEX NAME)

CM

CRN 7398-69-8 CMF C8 H16 N . Cl

$$\begin{array}{c} \text{Me} & \cdot \\ \text{H}_2\text{C} == \text{CH} - \text{CH}_2 - \text{N} \stackrel{+}{\longrightarrow} \text{CH}_2 - \text{CH} == \text{CH}_2 \\ \text{Me} \end{array}$$

● c1-

CM

CRN 79-10-7 CMF C3 H4 O2

68240-11-9 HCAPLUS RN

2-Propenamide, polymer with N-methyl-N-2-propenyl-2-propen-1-amine hydrochloride (9CI) (CA INDEX NAME)

CM 1

CRN 13107-01-2 CMF C7 H13 N . C1 H

$$\begin{array}{c} \text{Me} \\ | \\ \text{H}_2\text{C} \begin{array}{c} \longrightarrow \text{CH} - \text{CH}_2 - \text{CH} \\ \longrightarrow \text{CH}_2 - \text{CH} \\ \longrightarrow \text{CH}_2 \end{array} \text{CH}_2$$

● HCl

CM

CRN 79-06-1 CMF C3 H5 N O

$$\begin{matrix} & \circ \\ \parallel \\ \text{H}_2\text{N}-\text{C}-\text{CH} & \text{CH}_2 \end{matrix}$$

```
165957-71-1 HCAPLUS
RN
     1H-Imidazolium, 1-ethenyl-3-methyl-, chloride, polymer with 2-propenamide
CN
     (9CI) (CA INDEX NAME)
     CM
     CRN 13474-25-4
     CMF C6 H9 N2 . C1
 Ме
      cH = CH_2
    ● c1-
*** FRAGMENT DIAGRAM IS INCOMPLETE ***
     CM
           2
     CRN 79-06-1
CMF C3 H5 N O
H_2N-C-CH=CH_2
     321903-91-7 HCAPLUS
     1H-Imidazolium, 1-ethenyl-3-methyl-, chloride, polymer with N-dodecyl-2-propenamide and 2-propenamide (9CI) (CA INDEX NAME)
          1
     CM
     CRN 13474-25-4
CMF C6 H9 N2 . C1
 Me
      сн=сн2
    ● c1-
*** FRAGMENT DIAGRAM IS INCOMPLETE ***
     CM
          2
     CRN 1506-53-2
CMF C15 H29 N O
```

Me- (CH<sub>2</sub>) 
$$_{11}$$
 - NH- C- CH= CH<sub>2</sub>

CRN 79-06-1 CMF C3 H5 N O

RN 321904-01-2 HCAPLUS

2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, polymer with CN.alpha.-(1-oxo-2-propenyl)-.omega.-methoxypoly(oxy-1,2-ethanediyl), graft(9CI) (CA INDEX NAME)

CM 1

CRN 32171-39-4 CMF (C2 H4 O)n C4 H6 O2 CCI PMS

$$H_2C = CH - C - CH_2 - CH_2 - CH_2 - OMe$$

CM

CRN 7398-69-8 CMF C8 H16 N . Cl

$$\begin{array}{c} \text{Me} \\ | \\ \text{H}_2\text{C} \end{array} \\ \text{CH-CH}_2 - \begin{array}{c} \text{N}^+ \\ | \\ \text{Me} \end{array} \\ \text{CH}_2 - \text{CH} \end{array} \\ \text{CH}_2$$

● c1-

321936-97-4 HCAPLUS RN

 $\hbox{2-Propen-1-aminium, $N$, $N$-dimethyl-$N$-2-propenyl-, chloride, polymer with $N$-dimethyl-$N$-2-propenyl-, chloride, polymer with $N$-dimethyl-$N$-2-propenyl-, $N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethyl-$N$-dimethy$ .alpha.-(1-oxo-2-propenyl)-.omega.-methoxypolyfoxy(methyl-1,2-ethanediyl)], graft (9CI) (CA INDEX NAME)

CM

CRN 83844-54-6

CMF (C3 H6 O)n C4 H6 O2 CCI IDS, PMS CDES 8:ID

$$H_2C = CH - C - COMe$$

CRN 7398-69-8 CMF C8 H16 N . Cl

$$\begin{array}{c} \text{Me} \\ | \\ \text{H}_2\text{C} = \text{CH} - \text{CH}_2 - \text{N} \xrightarrow{+} \text{CH}_2 - \text{CH} = \text{CH}_2 \\ | \\ \text{Me} \end{array}$$

● c1-

RE.CNT 10

RE

- (1) Day, C; US 5900233 A 1999 HCAPLUS
  (2) Fields, J; US 4211765 A 1980 HCAPLUS
  (3) Hadvary, P; US 4598089 A 1986 HCAPLUS
  (4) Hoffmann La Roche; EP 0129748 A 1985 HCAPLUS
  (5) Holmes-Farley, S; US 5607669 A 1997 HCAPLUS
  ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
=> d bib abs bitstr 3
L56 ANSWER 3 OF 12 HCAPLUS COPYRIGHT 2001 ACS
AN
               2001:10589 HCAPLUS
DN
               134:76136
ТT
               Preparation and use of cross-linked cationic polymers
               in skin cosmetic compositions and in dermatological compositions % \left( 1\right) =\left( 1\right) \left( 1\right) \left(
               Hossel, Peter; Tiefensee, Kristin; Sanner, Axel; Dienig, Reinhold;
               Gotsche, Michael; Zeitz, Katrin
               Basf A.-G., Germany
PΑ
SO
               Eur. Pat. Appl., 21 pp.
                CODEN: EPXXDW
DT
               Patent
LA
               German
FAN.CNT 1
               PATENT NO.
                                                                   KIND DATE
                                                                                                                                        APPLICATION NO. DATE
                 -----
                                                    A2 20010103
A3 20010117
                                                                                                                                        EP 2000-113725 20000628
               EP 1064924
               EP 1064924
                           R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
                                         IE, SI, LT, LV, FI, RO
                                                                  A1 20010104
                DE 19929758
                                                                                                                                        DE 1999-19929758 19990629
                                                                      A2
                JP 2001055321
                                                                                        20010227
                                                                                                                                        JP 2000-191019
                                                                                                                                                                                              20000626
                                                                   Α
                                                                                                                                        BR 2000-2906
               BR 2000002906
                                                                                        20010130
                                                                                                                                                                                               20000628
                                                                                        20010207
                                                                                                                                        CN 2000-118459
                                                                                                                                                                                               20000629
               CN 1282571
                                                                        Α
PRAI DE 1999-19929758 A
                                                                                       19990629
               The invention concerns the prepn. of cross-linked
               cationic polymers by radical polymn. from N-vinylimidazole derivs.,
               diallylamine derivs., neutral or basic watersol. monomers, unsatd
                . acid or anhydride, and a crosslinker
               contg. two non-conjugated double bonds; followed by protonation and/or
               quaternation of the partially quaternized monomers and
               using the product in dermatol. compns. Thus triallylamine-N-
               vinylpyrrolidone-3-methyl-1-vinylimidazole copolymer was prepd. and used
                in a W/O skin cream prepn. with the following wt./wt.% compn. : copolymer
               0.5; Cremophor A6 2.0; Cremophor A 25 2.0; Lanette O 2.0; Imwitor 960 3.0;
               paraffin oil 5.0; jojoba oil 4.0; Luvitol EHO 3.0; Abil 350 1.0; Amerchol
               L 101 3.0; Veegum Ultra 0.5; 1,2-propylene glycol 5.0; imidazolidinyl urea 0.3; phenoxyethanol 0.5; D-panthenol 1.0; water ad 100.
TT
               219805-93-3P 219805-94-4P 315667-03-9P
               315667-05-1P 315667-06-2P 315667-07-3P
               315667-08-4P
               RL: BSU (Biological study, unclassified); SPN (Synthetic preparation);
               BIOL (Biological study); PREP (Preparation)
                          (prepn. and use of cross-linked cationic polymers
                          in skin cosmetic compns. and in dermatol. compns.)
               219805-93-3 HCAPLUS
               2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, polymer with 1,3-diethenyl-2-imidazolidinone and 1-ethenyl-2-pyrrolidinone (9CI) (CA
               INDEX NAME)
                             1
               CM
               CRN 13811-50-2
               CMF C7 H10 N2 O
      CH=CH2
                 CH = CH_2
```

CRN 7398-69-8 CMF C8 H16 N . Cl

 $\begin{array}{c} \text{Me} \\ \downarrow \\ \text{H}_2\text{C} \xrightarrow{\cdot} \text{CH} \xrightarrow{\cdot} \text{CH}_2 \xrightarrow{\cdot} \text{CH}_2 \xrightarrow{\cdot} \text{CH}_2 \xrightarrow{\cdot} \text{CH}_2 \\ \downarrow \\ \text{Me} \end{array}$ 

• cl-

CM 3

CRN 88-12-0 CMF C6 H9 N O

CH== CH<sub>2</sub>

RN 219805-94-4 HCAPLUS
CN 1H-Imidazolium, 1-ethenyl-3-methyl-, chloride, polymer with
1,3-diethenyl-2-imidazolidinone and 1-ethenyl-2-pyrrolidinone (9CI) (CA

INDEX NAME)

CM 1

CRN 13811-50-2 CMF C7 H10 N2 O

CH=CH2

N
O
CH=CH2

CM 2

CRN 13474-25-4 CMF C6 H9 N2 . Cl

● c1-

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 3

CRN 88-12-0 CMF C6 H9 N O

RN 315667-03-9 HCAPLUS
CN 1H-Imidazolium, 1-ethenyl-3-methyl-, methanesulfonate, polymer with N,N-di-2-propenyl-2-propen-1-amine and 1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)

CM

CRN 102-70-5 CMF C9 H15 N

$$\begin{array}{c} \text{CH}_2\text{--}\text{CH} = \text{CH}_2 \\ | \\ \text{H}_2\text{C} = \text{CH} - \text{CH}_2 - \text{N} - \text{CH}_2 - \text{CH} = \text{CH}_2 \end{array}$$

CM 2

CRN 88-12-0 CMF C6 H9 N O

CM 3

CRN 264255-37-0 CMF C6 H9 N2 . C H3 O3 S

CM 4

CRN 45534-45-0 CMF C6 H9 N2

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 5

CRN 16053-58-0 CMF C H3 O3 S

RN 315667-05-1 HCAPLUS

CN 1H-Imidazolium, 1-ethenyl-2,3-dimethyl-, methanesulfonate, polymer with 1,3-diethenyl-2-imidazolidinone and 1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)

CM 1

CRN 13811-50-2 CMF C7 H10 N2 O

$$\begin{array}{c} \text{CH} = \text{CH}_2 \\ | \\ \text{N} \\ \text{O} \\ \text{CH} = \text{CH}_2 \end{array}$$

CM 2

CRN 88-12-0 CMF C6 H9 N O

CM 3

CRN 315667-04-0

CMF C7 H11 N2 . C H3 O3 S

CM 4

CRN 45657-58-7 CMF C7 H11 N2

$$\begin{array}{c} \text{Me} \\ \text{N} \\ \text{N} \\ \text{Me} \\ \\ \text{CH----} \text{CH}_2 \end{array}$$

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM

CRN 16053-58-0 CMF C H3 O3 S

315667-06-2 HCAPLUS RN 1H-Imidazolium, 1-ethenyl-3-methyl-, methanesulfonate, polymer with 1-ethenyl-2-pyrrolidinone and (1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] di-2-propenoate (9CI) (CA INDEX NAME)

CM

CRN 42978-66-5 CMF C15 H24 O6 CCI IDS CDES \*

3 (.D1-Me)

CM

CRN 88-12-0 CMF C6 H9 N O

CM

CRN 264255-37-0 CMF C6 H9 N2 . C H3 O3 S

CRN 45534-45-0 CMF C6 H9 N2

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM S

CRN 16053-58-0 CMF C H3 O3 S

RN 315667-07-3 HCAPLUS

CN 1H-Imidazolium, 1-ethenyl-3-methyl-, methanesulfonate, polymer with 1-ethenyl-2-pyrrolidinone and oxybis(2,1-ethanediyloxy-2,1-ethanediyl) di-2-propenoate (9CI) (CA INDEX NAME)

CM :

CRN 17831-71-9 CMF C14 H22 O7

PAGE 1-B

 $-cH = cH_2$ 

CM 2

CRN 88-12-0 CMF C6 H9 N O

CRN 264255-37-0

 $\ensuremath{\mathsf{CMF}}$  C6 H9 N2 . C H3 O3 S

CM 4

CRN 45534-45-0 CMF C6 H9 N2

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 5

CRN 16053-58-0 CMF C H3 O3 S

RN 315667-08-4 HCAPLUS

2-Propenoic acid, polymer with N,N-di-2-propenyl-2-propen-1-amine and 1-ethenyl-1H-imidazole (9CI) (CA INDEX NAME)

CM

CRN 1072-63-5 CMF C5 H6 N2

CM 2

CRN 102-70-5 CMF C9 H15 N LAMM 09/771,595

$$\begin{array}{c} \text{CH}_2\text{--}\text{CH} \Longrightarrow \text{CH}_2 \\ \text{H}_2\text{C} \Longrightarrow \text{CH}^-\text{--}\text{CH}_2\text{---}\text{N}^-\text{---}\text{CH}_2\text{---}\text{---}\text{CH}_2 \end{array}$$

```
=> d bib abs hitstr 4
L56 ANSWER 4 OF 12 HCAPLUS COPYRIGHT 2001 ACS
     1999:736545 HCAPLUS
ΑN
DN
     131:352821
TΤ
     Method for activating active hydrogen and activation catalyst
     Takahashi, Yoshiyuki; Yamamoto, Hiroshi; Hirano, Yoshiaki; Morita,
ΙN
     Takehiko; Kubo, Takafumi; Omoto, Ichiro
     Nippon Shokubai Co., Ltd., Japan
PΑ
     PCT Int. Appl., 75 pp.
SO
     CODEN: PIXXD2
DТ
     Patent
LA
     Japanese
FAN.CNT 2
     PATENT NO.
                         KIND DATE
                                                 APPLICATION NO. DATE
                                _____
PΙ
     WO 9958242
                         A1 19991118
                                                 WO 1999-JP2438 19990512
          W: US
          RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
               PT, SE
     JP 2000033268
                                20000202
                                                 JP 1999-129801
                          A2
                                                                     19990511
     EP 1022058
                          Al
                                20000726
                                                 EP 1999-919529
                                                                    19990512
          R: DE, FR, GB
PRAI JP 1998-129080 A
                                19980512
     JP 1999-129804
                          Α
                                19990511
                        W
     WO 1999-JP2438
                               19990512
     An activation catalyst wherein at least one of the atoms which constitute
     a functional group has an ESPD (electrostatic potential derived) charge in the range of -0.65 to -1.05 (electrons) or an activation catalyst which
     has a cyclic quaternary ammonium salt, as a functional group,
     wherein the nitrogen atom constituting the ammonium salt has an ESPD
     charge in the range of +0.4 to +1.3 (electrons) is disclosed. Such a
     catalyst can activate with efficiency an active hydrogen of a compd.,
     utilizing the atom having an ESPD charge in the above-mentioned range as
     an active site. That is, the catalyst is suitable as an activation
     catalyst in various reactions accompanying activation of a hydrogen atom
     in a mol. of a reactant. Further, a reaction excellent in selectivity can be carried out with the catalyst. Thus, heating 6-(N,N-dipropenylamino)-4-thiahexanoic acid and acrylic acid with trimethylolpropane triacrylate in water to 70.degree., adding V 50 (azo compd.) to the reaction mixt. over
     20 min, mixing for 3 h and maturing overnight gave polymer beads with
     diam. 0.1-2 mm and ESPD charge -0.75 (electrons). Hydroxypropylating
     acrylic acid (I) with propylene oxide (II) at a I/II molar ratio 1:1.2 in the presence of 10% (based on I) the polymer at 90.degree. for 2
     h gave hydroxypropyl acrylate at a conversion rate 95% and selectivity
     92%.
     199174-46-4P, Acrylic acid-6-(N, N-dipropenylamino)-4-thiahexanoic
     acid-trimethylolpropane triacrylate copolymer
     RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP
      (Preparation); USES (Uses)
         (catalysts; method for activating active hydrogen and activation
         catalyst)
     199174-46-4 HCAPLUS
     2-Propenoic acid, polymer with 3-[[2-(di-2-propenylamino)ethyl]thio]propan
     oic acid and 2-ethyl-2-[[(1-oxo-2-propenyl)oxy]methyl]-1,3-propanediyl
     di-2-propenoate (9CI) (CA INDEX NAME)
     CM
     CRN 199174-38-4
CMF C11 H19 N O2 S
                CH2-CH2-S-CH2-CH2-CO2H
```

H2C == CH - CH2 - N - CH2 - CH == CH2

CRN 15625-89-5 CMF C15 H20 O6

CM 3

CRN 79-10-7 CMF C3 H4 O2

$$0 \\ || \\ HO-C-CH == CH_2$$

RE.CNT 13

RE

- (1) Bayer Ag; EP 115006 Al HCAPLUS
  (2) Bayer Ag; DE 3248778 Al HCAPLUS
  (3) Bayer Ag; US 4563371 A HCAPLUS
  (4) Bayer Ag; JP 59133372 A 1984 HCAPLUS
  (5) Nippon Shokubai Co Ltd; EP 841350 Al HCAPLUS
  ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
=> d bib abs hitstr 5
L56 ANSWER 5 OF 12 HCAPLUS COPYRIGHT 2001 ACS
     1998:485121 HCAPLUS
ΑN
     129:140707
DN
ΤI
     Slip-coated elastomeric flexible articles and their method of manufacture
     Weikel, William Joseph; Bullock, John W.
PΑ
     Johnson & Johnson Medical, Inc., USA
     PCT Int. Appl., 59 pp.
SO
     CODEN: PIXXD2
DТ
     Patent
LA
     English
FAN.CNT 1
     PATENT NO.
                       KIND DATE
                                               APPLICATION NO. DATE
                                               WO 1997-US23777 19971223
                        A1 19980709
PΙ
     WO 9829484
         W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE,
              DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL,
              PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
          RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI,
              FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG
                                               AU 1998-56181
                              19980731
     AU 9856181
                                                                  19971223
                         A1
     EP 951501
                         Α1
                              19991027
                                               EP 1997-952610
                                                                 19971223
         R: DE, GB, LU
     CN 1242786
                              20000126
                                               CN 1997-181138
                                                                  19971223
                     Α
     JP 2001508477
                              20010626
                                               JP 1998-530171
                         Т2
                                                                  19971223
     US 1996-777105 A
WO 1997-US23777 W
PRAI US 1996-777105
                              19961231
                              19971223
     In accordance with the present invention, there is provided a flexible
     article displaying slip properties with respect to damp and dry mammalian
     tissue without use of powder lubricants. The article is comprised of an
     rubber substrate coated on 1 side with a crosslinked polymer
     film, which is optionally overcoated with a lubricant. The coating is
     non-blocking, exhibits excellent adhesion to the substrate layer even at
     high elongation values and also exhibits excellent dry slip during, for
     example, donning of a surgeon's glove. The coating is prepd. from a
     coating compn. contg. an acrylic-type resin which have reactive groups such as carboxy and hydroxy. The lubricant compn. confers excellent
     damp/wet slip during, for example, damp/wet donning of a surgeon's glove.
     The lubricant compn. is selected from the group consisting of a first
     compn. and a second compn. The first compn. comprises an acetylenic diol
     and at least one compd. selected from the group consisting of an
     organo-modified silicone, and amino-modified silicone,
     and a cationic surfactant. The second compn. comprises a cationic
     surfactant and at least one compd. selected from the group consisting of
     an organo-modified {\tt silicone}, an amino-modified {\tt silicone}
     , and an acetylenic diol. The elastomer may be natural or synthetic, and
     is preferably selected from the group consisting of natural rubber,
     polyurethane, a conjugated diene homopolymer, a copolymer of .gtoreq.2
     conjugated dienes, a copolymer of .gtoreq.1 conjugated diene and .gtoreq.1 vinyl monomer, and combinations thereof. The cationic surfactant is
     preferably 1-hexadecylpyridinium chloride monohydrate.
TT
     26590-05-6, Polyquaternium 7
     RL: TEM (Technical or engineered material use); USES (Uses)
         (Mack K 007, lubricant top layer component; powder-free rubber articles
        having slip coatings based on crosslinkable acrylic polymers
         and optionally lubricant top layers)
RN
     26590-05-6 HCAPLUS
     2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, polymer with
     2-propenamide (9CI) (CA INDEX NAME)
     CM
     CRN 7398-69-8
     CMF C8 H16 N . C1
```

$$\begin{array}{c} \text{Me} \\ \downarrow \\ \text{H}_2\text{C} = \text{CH} - \text{CH}_2 - \text{N} \xrightarrow{+} \text{CH}_2 - \text{CH} = \text{CH}_2 \\ \downarrow \\ \text{Me} \end{array}$$

• c1-

CM 2

CRN 79-06-1

CMF C3 H5 N O

```
=> d bib abs hitstr 6
L56 ANSWER 6 OF 12 HCAPLUS COPYRIGHT 2001 ACS
     1996:452330 HCAPLUS
AN
     125:87513
DN
ΤT
     Preparation and properties of diallyl quaternary ammonium
     polymers as superabsorbent compositions for absorbing electrolyte-
     containing body fluids
     Fornasari, Giancarlo; Gagliardini, Alessandro
ΙN
PΑ
     Procter and Gamble Company, USA
SO
     PCT Int. Appl., 20 pp.
     CODEN: PIXXD2
DT
     Patent
     English
A.T
FAN CNT 1
     PATENT NO.
                        KIND DATE
                                                 APPLICATION NO. DATE
PΙ
     WO 9615162
                         A1
                               19960523
                                                 WO 1995-US14676 19951113
          W: AM, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB,
              GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM,
              TT, UA
          RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR,
              NE, SN, TD, TG
     AU 9642348
                          A1
                               19960606
                                                 AU 1996-42348
                                                                    19951113
                              19970827
                                                 EP 1995-940680
                                                                   19951113
     EP 791019
                          Α1
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE
9509638 A 19971014 BR 1995-9638 19951113
     BR 9509638
     CN 1171796
                          Α
                                19980128
                                                 CN 1995-197178
                                                                    19951113
     HU 77804
                                19980828
                                                 HU 1998-1032
                                                                    19951113
                          A2
     HU 216321
                          В
                               19990628
     JP 10509471
                          T2
                              19980914
                                                 JP 1995-516229
                                                                    19951113
                                20000704
                                                 US 1997-836122
                                                                    19970512
     US 6084045
                         Α
PRAI IT 1994-T0888
                          Α
                                19941110
     WO 1995-US14676 W
                               19951113
     Water-swellable water-sol. polymers, with high water absorbency (esp. with respect to body fluids), are prepd. from a diallylic quaternary
     ammonium salt monomer and a polyfunctional vinyl compd. (as
     crosslinking agent) by cationic aq. phase polymn. in the
     presence of a free radical initiator. The polymer, which contains a substantial proportion of the functional groups in the
     basic form, is of general formula [(CH2:CHCH2)2NR1R2]+X- [R1,R2 can be a
     wide variety of org. radicals (esp. satd. aryl and hydrocarbyl, and
     hydrocarbon groups contg. a functional group); X- is an anion (esp. a
     halide, nitrate, phosphate, nitrite, carbonate, bicarbonate, borate, sulfate, or carboxylate)]. Preferred crosslinking agents are
     N,N-methylbisacrylamide and divinylbenzene. The polymers are esp. suited for absorbing electrolyte-contg. body fluids (saliva, urine, menses,
     etc.).
     29299-74-9P
     RL: IMF (Industrial manufacture); NUU (Nonbiological use, unclassified);
     PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
     ; USES (Uses)
         (water-swellable water-insol.; quaternary ammonium polymers
         as superabsorbent compns. for absorbing electrolyte-contg. body fluids)
     29299-74-9 HCAPLUS
     CN
     CM
          1
     CRN 7398-69-8
     CMF C8 H16 N . Cl
```

$$\begin{array}{c} \text{Me} \\ | \\ \text{H}_2\text{C} = \text{CH} - \text{CH}_2 - \text{N} \stackrel{+}{-} \text{CH}_2 - \text{CH} = \text{CH}_2 \\ | \\ \text{Me} \end{array}$$

● cl-

CM 2
CRN 110-26-9
CMF C7 H10 N2 O2

```
L56 ANSWER 7 OF 12 HCAPLUS COPYRIGHT 2001 ACS
      1995:537365 HCAPLUS
 ΑN
 DN
      123:257604
      Synthesis and catalytic properties of hydrophobically modified
 ΤI
      poly(alkylmethyldiallylammonium chlorides)
· AU
      Wang, Guang-Jia; Engberts, Jan B. F. N.
      Department of Organic and Molecular Inorganic Chemistry, University of
      Groningen, AG Groningen, Neth.
Eur. Polym. J. (1995), 31(5), 409-17
 SO
      CODEN: EUPJAG; ISSN: 0014-3057
 DΤ
      Journal
 LA
      English
      Novel non-crosslinked and crosslinked, hydrophobically
      modified homo- and copolymers were synthesized by free-
      radical cyclo(co)polymn. of alkylmethyldiallylammonium
      chloride monomers in aq. soln. using ammonium persulfate as the initiator.
      Crosslinking was brought about by addn. of a small amt. of
      N,N'-methylenebis[acrylamide]. The crosslinked homo- and copolymers showed an increase of their reduced viscosity in aq. soln. upon
      controlled introduction of crosslinking agent into their chem.
      structure. Viscosity measurements revealed that the conformational
      transition of polysoaps to compact coils in aq. soln. is strongly
      dependent upon the hydrophobic group content of the polysoaps. The
      formation of hydrophobic microdomains is akin to intramol. micelle
      formation. Depending on the hydrophobic group content and the percentage
      of crosslinking, intermol. aggregation was also revealed by
      viscosity measurements at higher concns. of polysoap. The hydrophobic
      microdomains of the non-crosslinked and crosslinked
      polysoaps were characterized by hypsochromic shifts of the long-wavelength
      absorption band of methyl orange as a solvatochromic probe, noncovalently
      bound to the macromol. Catalysis of the unimol. decarboxylation of
      6-nitrobenzisoxazole-3-carboxylate by the non-crosslinked and
      crosslinked copolymers was investigated in aq. soln. at pH 11.3
      and 30.degree.. The crosslinked polysoaps exhibited higher
      catalytic activities for decarboxylation than their non-
      crosslinked analogs. A max. in rate const. was found at about
      0.2% (wt./wt.) of crosslinking agent in the crosslinked
      polysoaps. The decarboxylation rate is strongly dependent upon the hydrophobic group content in the polysoaps.
      29299-74-9P, Dimethyldiallylammonium chloride-
      methylenebisacrylamide polymer 169308-82-1P
      RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP
      (Preparation); USES (Uses)
(prepn. and catalytic properties of hydrophobically modified
         poly(alkyldiallylmethylammonium chlorides))
 RN
      29299-74-9 HCAPLUS
      2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, polymer with
 CN
      N, N'-methylenebis[2-propenamide] (9CI) (CA INDEX NAME)
      CM
      CRN 7398-69-8
      CMF C8 H16 N . Cl
               Ме
H_2C = CH - CH_2 - N + CH_2 - CH = CH_2
               Me
```

=> d bib abs hitstr 7

CRN 110-26-9 CMF C7 H10 N2 O2

RN

169308-82-1 HCAPLUS
1-Dodecanaminium, N-methyl-N,N-di-2-propenyl-, chloride, polymer with N,N-dimethyl-N-2-propenyl-2-propen-1-aminium chloride and N,N'-methylenebis[2-propenamide] (9CI) (CA INDEX NAME) CN

CM 1

CRN 23025-01-6 CMF C19 H38 N . C1

$$\begin{array}{c} \text{Me} \\ | \\ | \\ \text{H}_2\text{C} = \text{CH} - \text{CH}_2 - \text{N} + \text{(CH}_2)_{11} - \text{Me} \\ | \\ \text{CH}_2 - \text{CH} = \text{CH}_2 \end{array}$$

● c1-

CM

CRN 7398-69-8 CMF C8 H16 N . Cl

$$\begin{array}{c} \text{Me} \\ | \\ | \\ + \text{CH} - \text{CH}_2 - \text{N} + \text{CH}_2 - \text{CH} + \text{CH}_2 \\ | \\ | \\ \text{Me} \end{array}$$

● cl-

CM 3

CRN 110-26-9 CMF C7 H10 N2 O2

## LAMM 09/771,595

```
=> d bib abs hitstr 8
L56 ANSWER 8 OF 12 HCAPLUS COPYRIGHT 2001 ACS
     1994:307079 HCAPLUS
AN
     120:307079
DN
TΙ
     Hair-conditioning style-control shampoos containing cationic polymers and
     surfactants
ΤN
     Patel, Amrit; Robbins, Clarence R.
PΑ
     Colgate-Palmolive Co., USA
     PCT Int. Appl., 22 pp.
SO
     CODEN: PIXXD2
DТ
     Patent
     English
LA
FAN.CNT 1
     PATENT NO.
                       KIND DATE
                                             APPLICATION NO. DATE
     -----
                       ____
PΙ
     WO 9406410
                       A1 19940331
                                             WO 1993-US8822 19930922
         W: AU, BB, BG, BR, BY, CA, CZ, FI, HU, JP, KP, KR, KZ, LK, MG, MN,
             MW, NO, NZ, PL, PT, RO, RU, SD, SK, UA, VN
         RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG
     ZA 9306929
                      A 19950320
                                            ZA 1993-6929
                                                              19930920
     CN 1086992
                       Α
                             19940525
                                             CN 1993-117881
                                                               19930922
                                                              _
19930922
     EP 661965
                       A1 19950712
                                             EP 1993-921662
                            19990630
     EP 661965
                       В1
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, NL, PT, SE
     AU 678993
                  B2 19970619
                                            AU 1993-49284
                                                             19930922
     AT 181664
                             19990715
                                             AT 1993-921662
                        Ε
                                                               19930922
PRAI US 1992-948516
                             19920922
     US 1993-118411
                             19930913
     WO 1993-US8822
                             19930922
AB
     A hair-conditioning style-control shampoo in an aq. emulsion or suspension
     form comprises (a) a hair-conditioning effective amt. of at least one
     cationic polymer having a charge d. >200; (b) at least one nonarom.
     anionic surfactants; (c) at least one arom. or short-chained aliph. anionic surfactant; and (d) the remainder water. For example, a shampoo
     contained ammonium lauryl sulfate 19, cocamidopropyl betaine 4
     hydroxyethyl cellulose 0.4, Merquat 100 1, NaH2PO4 0.2, Na2HPO4 0.2, C20-40 alc. 3, PEG PPG oleate 0.8,
     distearyldimethylammonium chloride 2, light mineral oil 1, additives and
     water to 100%.
ΙT
     29297-55-0, Vinylimidazole-vinylpyrrolidone copolymer
     RL: BIOL (Biological study)
        (Hair-conditioning style-control shampoos contg.)
     29297-55-0 HCAPLUS
RN
CN
     2-Pyrrolidinone, 1-ethenyl-, polymer with 1-ethenyl-1H-imidazole (9CI)
     (CA INDEX NAME)
     CRN 1072-63-5
     CMF C5 H6 N2
     CH == CH_2
     CM
          2
     CRN 88-12-0
     CMF C6 H9 N O
```

```
=> d bib abs hitstr 9
L56 ANSWER 9 OF 12 HCAPLUS COPYRIGHT 2001 ACS
    1994:300191 HCAPLUS
AN
     120:300191
DN
TT
     Copolymers of unsaturated carboxylic acids and
     quaternary ammonium compounds for use as thickeners and
     dispersants
     Schade, Christian; Sanner, Axel; Wekel, Hans Ulrich; Frosch, Franz;
IN
     Westenfelder, Horst
PA
     BASF A.-G., Germany
     Ger. Offen., 10 pp.
     CODEN: GWXXBX
DT
     Patent
LA
    German
FAN.CNT 1
    PATENT NO.
                     KIND DATE
                                           APPLICATION NO. DATE
                     _---
    DE 4213971
PΤ
                            19931104
                      A 1
                                           DE 1992-4213971 19920429
    WO 9322358
                      A1 19931111
                                           WO 1993-EP952
                                                           19930420
         W: CA, JP, US
        RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
               A1 19950215
B1 19960626
     EP 638098
                                          EP 1993-911483 19930420
     EP 638098
        R: DE, ES, FR, GB, IT
     JP 07505919 T2 19950629
ES 2088283 T3 19960801
                                           JP 1993-518878
                                                            19930420
                                           ES 1993-911483
     ES 2088283
                                                          19930420
PRAI DE 1992-4213971
                           19920429
    WO 1993-EP952
                           19930420
AΒ
    The title copolymers, esp. useful in cosmetics, are prepd. from 50-99.99%
     unsatd. C3-5 monocarboxylic and/or C4-8 dicarboxylic acids or anhydrides,
     0.01-50% vinylimidazolium deriv. or (meth)acrylate deriv. contq. a
     quaternary ammonium group, and, optionally, other monomers such as
     (meth)acrylate esters and crosslinking monomers contg. .gtoreq.2
     double bonds. A copolymer was prepd. from acrylic acid 200,
    N-dodecyl-N'-vinylimidazolium bromide 8.0, and pentaerythritol triallyl
     ether 1.2 g and used to prep. an aq. gel contg. triethanolamine (I) and an
    emulsion contg. I and paraffin oil.
    155085-28-2P 155085-30-6P 155085-32-8P
     155085-34-0P 155085-36-2P 155085-37-3P
     155085-41-9P 155085-42-0P 155085-43-1P
    155085-44-2P 155085-45-3P 155085-46-4P
     155085-47-5P 155085-48-6P
    RL: PREP (Preparation)
        (prepn. of, as thickeners and dispersants in cosmetics)
RN
    155085-28-2 HCAPLUS
    1H-Imidazolium, 1-dodecyl-3-ethenyl-, bromide, polymer with 2-propenoic
    acid and 3-(2-propenyloxy)-2,2-bis[(2-propenyloxy)methyl]-1-propanol (9CI)
      (CA INDEX NAME)
    CM
        1
    CRN 155085-25-9
    CMF C17 H31 N2 . Br
  CH==CH2
     (CH_2)_{11} - Me
```

Br-

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 2

CRN 1471-17-6 CMF C14 H24 O4

CM 3

CRN 79-10-7 CMF C3 H4 O2

$$0$$
 $||$ 
 $HO-C-CH=CH_2$ 

RN 155085-30-6 HCAPLUS

CN 1H-Imidazolium, 1-dodecyl-3-ethenyl-, bromide, polymer with octadecyl 2-methyl-2-propenoate, 2-propenoic acid and 3-(2-propenyloxy)-2,2-bis[(2-propenyloxy)methyl]-1-propanol (9CI) (CA INDEX NAME)

CM 1

CRN 155085-25-9 CMF C17 H31 N2 . Br

CH= CH<sub>2</sub>

$$N$$
 $N$ 

(CH<sub>2</sub>) 11- Me

• Br-

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 2

CRN 32360-05-7 CMF C22 H42 O2

$$$^{\text{O}}_{\text{H2}}$$$
 Me- (CH2) 17 - O- C- C- Me

CM 3

CRN 1471-17-6

CMF C14 H24 O4

$$\begin{array}{c} \text{CH}_2-\text{OH} \\ | \\ \text{H}_2\text{C} = \text{CH}-\text{CH}_2 \cdot \text{O-CH}_2 \cdot \text{CH}_2 - \text{O-CH}_2 - \text{CH} = \text{CH}_2 \\ | \\ \text{CH}_2-\text{O-CH}_2-\text{CH} = \text{CH}_2 \end{array}$$

CM 4

CRN 79-10-7 CMF C3 H4 O2

RN 155085-32-8 HCAPLUS

CN 1H-Imidazolium, 1-ethenyl-3-hexadecyl-, bromide, polymer with 2-propenoic acid and 3-(2-propenyloxy)-2,2-bis[(2-propenyloxy)methyl]-1-propanol (9CI) (CA INDEX NAME)

CM 1

CRN 155085-26-0 CMF C21 H39 N2 . Br

• Br-

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 2

CRN 1471-17-6 CMF C14 H24 O4

$$\begin{array}{c} \text{CH}_2-\text{OH} \\ | \\ \text{H}_2\text{C} = \text{CH}-\text{CH}_2-\text{O}-\text{CH}_2-\text{C}-\text{CH}_2-\text{O}-\text{CH}_2-\text{CH} = \text{CH}_2 \\ | \\ \text{CH}_2-\text{O}-\text{CH}_2-\text{CH} = \text{CH}_2 \\ \end{array}$$

CM 3

CRN 79-10-7 CMF C3 H4 O2

RN 155085-34-0 HCAPLUS

CN 1H-Imidazolium, 1-ethenyl-3-octadecyl-, chloride, polymer with 2-propenoic acid and 3-(2-propenyloxy)-2,2-bis[(2-propenyloxy)methyl]-1-propanol (9CI) (CA INDEX NAME)

CM 1

CRN 113150-79-1 CMF C23 H43 N2 . C1

### • c1-

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 2

CRN 1471-17-6 CMF C14 H24 O4

CM 3

CRN 79-10-7 CMF C3 H4 O2

$$^{\rm O}_{||}_{\rm HO-\,C-\,CH=\!\!\!\!-CH_2}^{\rm CH}$$

RN 155085-36-2 HCAPLUS

N 1H-Imidazolium, 1-ethenyl-3-(phenylmethyl)-, chloride, polymer with 2-propenoic acid and 3-(2-propenyloxy)-2,2-bis[(2-propenyloxy)methyl]-1-propanol (9CI) (CA INDEX NAME)

CM 1

CRN 70333-42-5 CMF C12 H13 N2 . C1

$$CH_2-Ph$$
 $N$ 
 $N$ 
 $CH$ 
 $CH$ 
 $CH$ 

● c1-

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM :

CRN 1471-17-6 CMF C14 H24 O4

$$\begin{array}{c} \text{CH}_2-\text{OH} \\ | \\ \text{H}_2\text{C} = \text{CH}-\text{CH}_2-\text{O}-\text{CH}_2-\text{C}-\text{CH}_2-\text{O}-\text{CH}_2-\text{CH}=-\text{CH}_2-\text{CH}_2\\ | \\ \text{CH}_2-\text{O}-\text{CH}_2-\text{CH}==\text{CH}_2 \end{array}$$

CM 3

CRN 79-10-7 CMF C3 H4 O2

RN 155085-37-3 HCAPLUS

1H-Imidazolium, 1-ethenyl-3-hexadecyl-, bromide, polymer with octadecyl 2-methyl-2-propenoate, 2-propenoic acid and 3-(2-propenyloxy)-2,2-bis[(2-propenyloxy)methyl]-1-propanol (9CI) (CA INDEX NAME)

CM

CRN 155085-26-0 CMF C21 H39 N2 . Br

• Br-

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 2

CRN 32360-05-7 CMF C22 H42 O2

$$$^{\mbox{O}}_{\mbox{CH}_2}$$$
 Me- (CH2)17-O-C-C-Me

CM 3

CRN 1471-17-6 CMF C14 H24 O4

$$\begin{array}{c} \text{CH}_2-\text{OH} \\ | \\ \text{H}_2\text{C} \end{array} = \text{CH}-\text{CH}_2-\text{O}-\text{CH}_2-\text{C}-\text{CH}_2-\text{O}-\text{CH}_2-\text{CH} \\ | \\ \text{CH}_2-\text{O}-\text{CH}_2-\text{CH} \\ \end{array} = \text{CH}_2$$

CM 4

CRN 79-10-7 CMF C3 H4 O2

155085-41-9 HCAPLUS 1H-Imidazolium, 1-dodecyl-3-ethenyl-, bromide, polymer with 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 155085-25-9 CMF C17 H31 N2 . Br

• Br-

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CRN 79-10-7 CMF C3 H4 O2

```
0
HO- C- CH= CH2
       155085-42-0 HCAPLUS
RN
       \label{eq:holder} \begin{array}{lll} \text{1H-Imidazolium, 1-dodecyl-3-ethenyl-, bromide, polymer with} \\ [R-(R^*,R^*)]-2,3-\text{dihydroxy-N,N'-di-2-propenylbutanediamide and 2-propenoic} \end{array}
CN
       acid (9CI) (CA INDEX NAME)
       CM
            1
       CRN 155085-25-9
       CMF C17 H31 N2 . Br
   CH = CH_2
        (CH_2) _{11}- Me
       • Br-
*** FRAGMENT DIAGRAM IS INCOMPLETE ***
       CM
      CRN 58477-85-3
CMF C10 H16 N2 O4
Absolute stereochemistry. Rotation (+).
       CM
       CRN 79-10-7
       CMF C3 H4 O2
но- с- сн= сн2
RN
       155085-43-1 HCAPLUS
       1H-Imidazolium, 1-dodecyl-3-ethenyl-, bromide, polymer with
CN
      N,N-dimethyl-N-[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]-3-sulfo-l-propanaminium inner salt and 2-propenoic acid (9CI) (CA INDEX NAME)
       CM 1
      CRN 155085-25-9
CMF C17 H31 N2 . Br
```

• Br-

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 2

CRN 3637-26-1 CMF C11 H21 N O5 S

CM 3

CRN 79-10-7 CMF C3 H4 O2

RN 155085-44-2 HCAPLUS
CN 1H-Imidazolium, 1-ethenyl-3-octadecyl-, chloride, polymer with bis[(1-oxo-2-propenyl)amino]acetic acid and 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 113150-79-1 CMF C23 H43 N2 . C1

$$\begin{array}{c} \text{CH} = \text{CH}_2 \\ | \\ N \\ | \\ N \\ \text{(CH}_2)_{17} - \text{Me} \end{array}$$

• c1-

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 2

CRN 4387-85-3 CMF C8 H10 N2 O4

CM 3

CRN 79-10-7 CMF C3 H4 O2

155085-45-3 HCAPLUS RN 1H-Imidazolium, 1-ethenyl-3-hexadecyl-, bromide, polymer with .alpha.-(1-oxo-2-propenyl)-.omega.-[(1-oxo-2-propenyl)oxy]poly(oxy-1,2-ethanediyl) and 2-propenoic acid (9CI) (CA INDEX NAME)

CM

CRN 155085-26-0 CMF C21 H39 N2 . Br

$$\begin{array}{c} \text{CH} \longrightarrow \text{CH}_2 \\ \\ \\ N \\ \\ \text{(CH}_2)_{15} - \text{Me} \end{array}$$

• Br-

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 2

CRN 26570-48-9 CMF (C2 H4 O)n C6 H6 O3 CCI PMS

$$H_2C = CH - C - CH_2 - CH_2$$

CM

CRN 79-10-7 CMF C3 H4 O2

CM 2

CRN 79-10-7 CMF C3 H4 O2

RN

155085-48-6 HCAPLUS
1H-Imidazolium, 1-ethenyl-3-hexadecyl-, bromide, polymer with
N,N'-methylenebis[2-propenamide] and 2-propenoic acid (9CI) (CA INDEX CN NAME)

CM 1

CRN 155085-26-0 CMF C21 H39 N2 . Br

• Br-

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 2

CRN 110-26-9 CMF C7 H10 N2 O2

CM 3

CRN 79-10-7 CMF C3 H4 O2

```
=> d bib abs hitstr 10
L56 ANSWER 10 OF 12 HCAPLUS COPYRIGHT 2001 ACS
     1983:595958 HCAPLUS
AN
DN
      99:195958
тT
      Insoluble, slightly swelling polymers from basic vinyl heterocycles
      Denzinger, Walter; Goertz, Hans Helmut; Sanner, Axel; Hartmann, Heinrich
     BASF A.-G. , Fed. Rep. Ger. Ger. Offen., 19 pp.
PΑ
SO
      CODEN: GWXXBX
DТ
      Patent
     German
FAN.CNT 1
     PATENT NO.
                         KIND DATE
                                                  APPLICATION NO. DATE
                          ----
                                                   -----
                          A1 19830915
                                                  DE 1982-3209224 19820313
EP 1983-102132 19830304
     DE 3209224
PΙ
      EP 88964
                          A2 19830921
                        A3 19841205
B1 19870902
      EP 88964
      EP 88964
          R: AT, BE, CH, DE, FR, GB, IT, LI, NL, SE
     US 4451582 A 19840529 US 1983-472242
AT 29220 E 19870915 AT 1983-102132
                                                                       19830304
                                                  AT 1983-102132
                                                                       19830304
     JP 03039087 B4
                          A2 19831013
B4 19910612
                                                  JP 1983-37553
                                                                       19830309
PRAI DE 1982-3209224
                                 19820313
                                19830304
      EP 1983-102132
     The title polymers, useful as ion exchangers, adsorbents, and carriers for
     proteins, are prepd. by the uncatalyzed polymn. of basic vinyl heterocyclic compds. with 0-30% comonomers and 0.1-10%
     crosslinkers. Thus, refluxing N-vinylpyrrolidone 60, N,N'-divinylethyleneurea (I) 1.5, 0.1N NaOH 6.65, and H2O 540 parts for 5 h while adding 540 parts 1-vinylimidazole and 10.8 parts I over 1.5 h and 200 parts H2O after 1, 2, and 3 h gave 90% copolymer [
      87865-40-5] as granules with particle size 0.1-3 mm. This polymer
      had H2O absorption 1.7 g/g, vs. 12.9 when polymd. by AIBN, and
      when quaternized with MeI had anion exchange capacity 5.0
     mequiv/q.
ΙT
     87865-40-5DP, quaternized
     RL: PREP (Preparation)
          (anion exchangers, prepn. and capacity of)
      87865-40-5 HCAPLUS
      2-Imidazolidinone, 1,3-diethenyl-, polymer with 1-ethenyl-1H-imidazole and
      1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)
     CM 1
     CRN 13811-50-2
     CMF C7 H10 N2 O
  сн== сн2
      CH = CH_2
     CM 2
     CRN 1072-63-5
```

CMF C5 H6 N2

CH--- CH2

CM 3

CRN 88-12-0 CMF C6 H9 N O

IT 87865-40-5P 87865-43-8P 87865-44-9P

RL: PREP (Preparation)

(gels, manuf. of) RN 87865-40-5 HCAPLUS

CN 2-Imidazolidinone, 1,3-diethenyl-, polymer with 1-ethenyl-1H-imidazole and 1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)

CM

CRN 13811-50-2 CMF C7 H10 N2 O

CM 2

CRN 1072-63-5 CMF C5 H6 N2

CM 3

CRN 88-12-0 CMF C6 H9 N O

RN 87865-43-8 HCAPLUS
CN 2-Propenoic acid, methyl ester, polymer with 1,3-diethenyl-2-imidazolidinone, 1-ethenyl-2-methyl-1H-imidazole, 1-ethenyl-2-pyrrolidinone and N,N'-methylenebis[2-propenamide] (9CI) (CA INDEX NAME)

CM 1

CRN 13811-50-2 CMF C7 H10 N2 O

$$CH = CH_2$$
 $N = O$ 
 $N = CH_2$ 
 $N = O$ 
 $N = CH_2$ 

CM 2

CRN 2851-95-8 CMF C6 H8 N2

$$N$$
 Me  $N$   $CH = CH2$ 

CM 3

CRN 110-26-9 CMF C7 H10 N2 O2

CM 4

CRN 96-33-3 CMF C4 H6 O2

CM 5

CRN 88-12-0 CMF C6 H9 N O

RN 87865-44-9 HCAPLUS

CN Acetic acid ethenyl ester, polymer with 1,3-diethenyl-2-imidazolidinone, N,N'-1,2-ethanediylbis[2-propenamide], 1-ethenyl-2-methyl-1H-imidazole and 1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)

CM :

CRN 13811-50-2 CMF C7 H10 N2 O

$$CH = CH_2$$
 $N = 0$ 
 $CH = CH_2$ 

CM 2

CRN 2956-58-3 CMF C8 H12 N2 O2

CM 3

CRN 2851-95-8 CMF C6 H8 N2

$$N$$
 $Me$ 
 $CH = CH_2$ 

CM 4

CRN 108-05-4 CMF C4 H6 O2

Aco-CH=CH2

CM 5

CRN 88-12-0 CMF C6 H9 N O

### => d bib abs hitstr 11

L56 ANSWER 11 OF 12 HCAPLUS COPYRIGHT 2001 ACS

1976:46246 HCAPLUS AN

DN 84:46246

TΤ Coating compositions polymerizable and crosslinkable using actinic radiation

IN Pastor, Stephen D.; Hernandez, Henry R.; Skoultchi, Martin M.

National Starch and Chemical Corp., USA PA

Ger. Offen., 31 pp. SO

CODEN: GWXXBX

DT Patent

LA German

ENN CHT 1

FAN.CNI I								
		PAT	TENT NO.	KIND	DATE	API	PLICATION NO.	DATE
	ΡI	DE	2519401	A1	19751120	DE	1975-2519401	19750430
		DE	2519401	C3	19790920			
		DE	2519401	B2	19790201			
		US	4097417	Α	19780627	US	1974-466264	19740502
		CA	1038546	A1	19780912	CA	1975-225766	19750429
		GB	1504364	Α	19780322	GB	1975-18309	19750501
		FR	2269548	A1	19751128	FR	1975-13867	19750502
		FR	2269548	B1	19790302			
		JΡ	50151983	A2	19751206	JP	1975-53768	19750502
		JР	56010948	B4	19810311			
	PRAI	US	1974-466264		19740502			

Compounding an acrylic monomer with an ethylenic group-contg. quaternary ammonium chloride, alkoxybenzoin and polyesters gave uv light-hardenable, elec.-conductive, coating compn., useful for manuf. of photoconducting paper when coated with ZnO [1314-13-2]-contg. compns. Thus, a mixt. of benzoin methyl ether [3524-62-7] 2.2, acrylic acid 1.3, and 2-butene-1, 4-diylbis[dimethyl[2-(methacryloyloxy)ethyl]ammonium chloride] 2.5 parts was applied on paper, hardened by uv light for 90 sec, and coated with a mixt. of 180.0 g dispersion from 128.0 g aq. crotonic acid-vinyl acetate copolymer [25609-89-6] contg. NH4OH and 80.0 g ZnO and 11.0 g acrylic binder to give a specimen for use for electrostatic printing.

58067-97-3 IT

RL: TEM (Technical or engineered material use); USES (Uses) (coatings, contg. polyesters, on paper, elec. conducting)

RN 58067-97-3 HCAPLUS

2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, polymer with (2)-2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl methyl 2-butenedioate (9CI) (CA INDEX NAME)

CM

CRN 58067-96-2 CMF C12 H16 O7 CDES 2:Z

Double bond geometry as shown.

CM

CRN 7398-69-8 CMF C8 H16 N . Cl

$$\begin{array}{c} \text{Me} \\ | \\ \text{H}_2\text{C} = --- \text{CH}^- \text{ CH}_2 - \frac{\text{N}^+ - \text{CH}_2 - \text{CH}}{|} = \text{CH}_2 \\ | \\ \text{Me} \end{array}$$

● c1-

```
L56 ANSWER 12 OF 12 HCAPLUS COPYRIGHT 2001 ACS
     1972:127776 HCAPLUS
ΑN
DN
     76:127776
TΙ
     Polymerizing .alpha.,.beta.-unsaturated aliphatic acid
     and amine group-containing monomers
IN
     Chujo, Kiyoshi; Tanaka, Kazunobu; Ohata, Keiichi
     Daicell Co., Ltd.
PA
     U.S., 4 pp.
CODEN: USXXAM
SO
DT
     Patent
LA
     English
FAN.CNT 1
     PATENT NO.
                      KIND DATE
                                             APPLICATION NO. DATE
                      ----
                                              -----
PI US 3634366 A 19720111
PRAI JP 1968-34989 19680523
                                             US 1969-827169 19690523
    In an inert atm. over 1-10 hr at 20-80.deg. 0.5-1.5:1 acid-amine contg.
     monomer copolymers were prepd. from a mono- or diacid and a compd. which
     can quaternize to an ammonium salt. Acrylic
     acid-dimethylaminoethyl methacrylate copolymers (I) [26655-25-4], prepd.
     under N, were amphoteric, electrolytic, and useful as soil conditioners and flocculating agents. Copolymers of vinylpyridines [1337-81-1], or
     1-vinyl-2-methylimidazole [2851-95-8] with various carboxy monomers (e.g.,
     acrylic acid [79-10-7], maleic anhydride [108-31-6], and crotonic
     acid [3724-65-0]) were similarly prepd.
     36313-51-6P
     RL: PREP (Preparation)
     (prepn. of)
36313-51-6 HCAPLUS
RN
     2-Propenoic acid, polymer with 1-ethenyl-4,5-dihydro-2-methyl-1H-imidazole
     (9CI) (CA INDEX NAME)
     CM
     CRN 1192-59-2
     CMF C6 H10 N2
      CH = CH_2
     CM 2
     CRN 79-10-7
     CMF C3 H4 O2
HO-C-CH=CH2
```

=> d bib abs hitstr 12

```
=> d bib abs hitstr 1-41
L59 ANSWER 1 OF 41 HCAPLUS COPYRIGHT 2001 ACS
AN
     2001:508031 HCAPLUS
     135:97213
     Aerosol hair compositions containing nonionically derivatized
ΤI
     starches
ΙN
     Paul, Charles W.; Henley, Matthew J.; Altieri, Paul A.; Vitale, Melissa
     J.; Tolchinsky, Maria; Solarek, Daniel B.; Cottrell, Ian W.
SO
     U.S. Pat. Appl. Publ., 12 pp., Cont.-in-part of U.S. Ser. No. 57,717,
     abandoned.
     CODEN: USXXCO
DT
     Patent
     English
LΑ
FAN.CNT 2
     PATENT NO.
                       KIND DATE
                                             APPLICATION NO. DATE
     _____
                              -----
     US 2001007655
                            20010712
                       A1
                                             US 1999-280614 19990329
     NO 9901660
                       A 19991011
A2 19991013
                                             NO 1999-1660
                                                                19990408
     EP 948958
                                             EP 1999-106171 19990408
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO
     CN 1234225
                             19991110
                                              CN 1999-107306
                  А
                                                               19990408
                            19991021
     AU 9923678
                        A1
                                              AU 1999-23678
                                                                19990409
                      A2 19991207
B2 19980409
A 19990329
     JP 11335247
                                              JP 1999-102429 19990409
PRAI US 1998-57717
     US 1999-280614
     The present invention is directed to low volatile org. compd. aerosol
     hair compns. which contain nonionically derivatized starches
     optionally hydrolyzed and/or ionically modified. Such compns. provide a
     clear soln. with a low viscosity, good spray characteristics, a clear,
     non-tacky film, good stiffness, and improved humidity resistance. Thus, a mousse contained polymer 3.00, Tergitol NP-9 0.60, Dowicil-200 0.20, water 88.20, and propellant A-46 8.00 g.
TT
     26590-05-6, Polyquaternium-7
     RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
        (aerosol hair compns. contg. nonionically derivatized
        starches)
     26590-05-6 HCAPLUS
RN
CN
     2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, polymer with
     2-propenamide (9CI) (CA INDEX NAME)
     CM
     CRN 7398-69-8
     CMF C8 H16 N . C1
              Ме
              - № + сн<sub>2</sub>- сн== сн<sub>2</sub>
н2С== Сн− Сн2
              Me
             ● C1 -
     CM
     CRN 79-06-1
     CMF C3 H5 N O
```

```
H2N-C-CH=CH2
L59 ANSWER 2 OF 41 HCAPLUS COPYRIGHT 2001 ACS
     2001:279399 HCAPLUS
     134:300613
DN
TΙ
     A washing composition for keratinous materials based on a surfactant, a
     cationic vinyllactam polymer and an acrylic terpolymer
IN
     Maurin, Veronique; Beauquey, Bernard
     L'oreal, Fr.
Eur. Pat. Appl., 12 pp.
PA
SO
     CODEN: EPXXDW
DТ
     Patent
LA
     French
FAN.CNT 1
     PATENT NO.
                        KIND DATE
                                               APPLICATION NO. DATE
PΤ
     EP 1092420
                        A1 20010418
                                            EP 2000-402664
                                                                  20000926
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
              IE, SI, LT, LV, FI, RO
                       A1 20010330
A2 20010828
A 19990929
     FR 2798853
                                                FR 1999-12171
                                                                   19990929
     JP 2001233745
                                                JP 2000-336706
                                                                 20000929
PRAI FR 1999-12171
   A hair wash comprising a surfactant, a cationic vinyllactam polymer and an acrylic terpolymer is disclosed (Markush structures given). A shampoo contained 30% cocoyl betaine 6, 70% sodium lauryl
     ether sulfate 16, Luviquat FC905 (vinylpyrrolidone-
     methylvinylimidazolium chloride copolymer) 0.75, Structure Plus (an
     acrylic terpolymer) 1, glycol distearate 2, preservatives q.s., and water
     q.s. 100 g.
     95144-24-4, Luviquat FC905 334660-43-4
     RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
         (washing compn. for keratinous materials based on surfactant, cationic
     vinyllactam polymer and acrylic terpolymer)
95144-24-4 HCAPLUS
RN
     {\tt 1H-Imidazolium,\ 1-ethenyl-3-methyl-,\ chloride,\ polymer\ with}
CN
     1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)
     CM
          1
     CRN 13474-25-4
     CMF C6 H9 N2 . C1
      сн == сн2
    ● c1-
*** FRAGMENT DIAGRAM IS INCOMPLETE ***
     CM
          2
     CRN 88-12-0
     CMF C6 H9 N O
```

CRN 1072-63-5 CMF C5 H6 N2

CM 2

CM 3 CRN 88-12-0 CMF C6 H9 N O

RE.CNT 4 RE

- (1) Colgate Palmolive Co; WO 9406403 A 1994 HCAPLUS (2) Elliott, R; US 5910472 A 1999 HCAPLUS (3) Procter & Gamble; WO 9501152 A 1995 HCAPLUS (4) Procter & Gamble; WO 9735545 A 1997 HCAPLUS

```
L59 ANSWER 3 OF 41 HCAPLUS COPYRIGHT 2001 ACS
AN
     2001:261041 HCAPLUS
DN
     134:285471
ΤI
     A washing composition for keratinous materials based on a surfactant, a
     polyorganosiloxane and a acrylic terpolymer
     Maurin, Veronique; Beauquey, Bernard
L'oreal, Fr.
ΙN
PA
SO
     Eur. Pat. Appl., 16 pp.
     CODEN: EPXXDW
DT
      Patent
LA
     French
FAN.CNT 1
     PATENT NO.
                         KIND DATE
                                                 APPLICATION NO. DATE
                         ----
     EP 1090632
                        A1
                                20010411
                                                  EP 2000-402657
                                                                     20000926
PΙ
          R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO
                          A1 20010330
     FR 2798846
                                                  FR 1999-12164
                                                                     19990929
                          A
     CN 1292260
                                20010425
                                                  CN 2000-124964
                                                                     20000927
     BR 2000004512
                          Α
                                20010410
                                                  BR 2000-4512
                                                                     20000928
                        A2
      JP 2001151645
                                20010605
                                                  JP 2000-295662
                                                                     20000928
PRAI FR 1999-12164
                                19990929
                          Α
     A washing compn. for keratinous materials based on a surfactant, \boldsymbol{a}
     polyorganosiloxane and an acrylic terpolymer is disclosed (Markush
      structure given). A hair prepn. contained propylene glycol 0.1,
     38% sodium N-cocoylamidoethyl N-ethoxy carboxymethyl glycinate 8, Jaguar Cl3S 0.2, 1-(hexadecyloxy)-2-octadecanol/cetyl alc. 2.5, copra acid monoisopropanolamide 0.5, 70% sodium lauryl ether sulfate 22, polydimethylsiloxane 2.7, Structure Plus (an acrylic terpolymer)
      1, perfume q.s., and water q.s. 100 g.
     29297-55-0D, quaternary derivs.
ΙT
     RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
         (washing compn. for keratinous materials based on surfactant,
         polyorganosiloxane and acrylic terpolymer)
     29297-55-0 HCAPLUS
RN
     2-Pyrrolidinone, 1-ethenyl-, polymer with 1-ethenyl-1H-imidazole (9CI)
CN
      (CA INDEX NAME)
     CM
     CRN 1072-63-5
     CMF C5 H6 N2
      CH = CH_2
     CM
     CRN 88-12-0
     CMF C6 H9 N O
  сн== cн<sub>2</sub>
RE.CNT 5
(1) Colgate Palmolive Co; WO 9406403 A 1994 HCAPLUS
```

```
(2) Nat Starch Chem Invest; EP 0824914 A 1998 HCAPLUS
(3) Nat Starch Chem Invest; EP 0825200 A 1998 HCAPLUS
(4) Procter & Gamble; WO 9210162 A 1992 HCAPLUS
(5) Snyder, M; US 5853707 A 1998
L59
    ANSWER 4 OF 41 HCAPLUS COPYRIGHT 2001 ACS
     2001:10587 HCAPLUS
AN
DN
     134:76119
ΤI
     Method for perming hair with a pretreatment with a composition
     containing at least an anionic polymer
     N'guyen, Ly-lan; Sabbagh, Anne
L'oreal, Fr.
IN
PA
SO
     Eur. Pat. Appl., 20 pp.
     CODEN: EPXXDW
DT
     Patent
     French
LA
FAN.CNT 1
     PATENT NO.
                       KIND DATE
                                              APPLICATION NO. DATE
                                        EP 2000-401595 20000606
     EP 1064921 A1 20010103
        R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO
     FR 2795316
                  A1 20001229
                                               FR 1999-8245
                                                                 19990628
     AU 733675
                        В2
                              20010524
                                              AU 2000-39428
                                                                 20000613
                        A2 20010324
     JP 2001031537
                                              JP 2000-193343
                                                                 20000627
                      A 20010314
A 19990628
                              20010314
                                              CN 2000-118782
     CN 1286976
                                                                 20000627
PRAI FR 1999-8245
     A method of perming hair with successive application of a
     reducing compn. and a fixative comprising at least a cationic polymer is
     disclosed. The three following compns. were applied successively on the
     hair for obtaining a permanent hair wave: compn. (a)
     contg. Luvimer MAE 1%, monoethanolamine q.s. pH = 7, and water q.s. 100
     g., compn. (b) contg. cysteine 3, spruce powder 5, monoethanolamine 2.2, fragrance 0.5, ethoxylated oleyl alc. 1, 40% sodium diethylenetriamine pentaacetate 0.4, hexadimethrine chloride 1.2, and water q.s. 90 g, compn.
     (c) contg. oxygen peroxide 8, Merquat-100 1, Rewoteric AMCAS 1,
     citric acid q.s. pH = 3, and water q.s. 100 g.
     29297-55-0, Vinylimidazole vinyl pyrrolidone copolymer
     RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
     (Uses)
        (method for perming hair with pretreatment with compn. contg.
        at least anionic polymer)
     29297-55-0 HCAPLUS
     2-Pyrrolidinone, 1-ethenyl-, polymer with 1-ethenyl-1H-imidazole (9CI)
     (CA INDEX NAME)
     CM
         1
     CRN 1072-63-5
     CMF C5 H6 N2
      CH== CH2
     CM
          2
     CRN 88-12-0
```

CMF C6 H9 N O

```
CH== CH2
RE.CNT 4
RE
(1) Basf Ag; DE 19750520 A 1999 HCAPLUS
(2) Cauwet, D; US 4240450 A 1980 HCAPLUS
(3) Hoch, D; US 4660580 A 1987
(4) Oreal; FR 2739279 A 1997 HCAPLUS
L59
     ANSWER 5 OF 41 HCAPLUS COPYRIGHT 2001 ACS
     2001:10586 HCAPLUS
AN
DN
     134:76118
     Mascara comprising an aqueous dispersion of polyurethane and wax
ΤI
IN
     Collin, Nathalie
PA
     L'oreal, Fr.
     Eur. Pat. Appl., 30 pp.
SO
     CODEN: EPXXDW
DT
     Patent
     French
LA
FAN.CNT 1
                       KIND DATE
     PATENT NO.
                                               APPLICATION NO. DATE
     _____ -_--
                              _____
                                               _____
     EP 1064920
                        A1 20010103
                                               EP 2000-401663 20000613
PI
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
              IE, SI, LT, LV, FI, RO
534 A1 20010105
     FR 2795634
                      A1
A1
                                               FR 1999-8411
                                                                  19990630
     WO 2001001936
                              20010111
                                               WO 2000-FR1713
                                                                 20000621
         W: BR, CA, CN, KR, MX
     JP 2001031539
                      A2 20010206
                                               JP 2000-195090
                                                                 20000628
PRAI FR 1999-8411
                        Α
                              19990630
     Mascaras comprising cationic and anionic polymers and an aq. dispersion of
     polyurethane and wax are disclosed. A mascara contained carnauba wax 7,
     bees wax 6, hydrogenated jojoba oil 2, rice ban wax 7, candelilla wax 2.5, amino-2-methyl-2-propane-1,3-diol 0.2, triethanolamine 2.4, stearic acid
     5.4, hydrosol. nonionic polymer 1.72, Avalure UR 450 (polyether-
     polyurethane) 1.9, sodium polymethacrylate 0.25, JR-400 0.1, pigments 6,
     preservatives and water q.s. 100 g.
     29297-55-0, Vinylimidazole vinyl pyrrolidone copolymer RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
     (Uses)
         (mascara comprising aq. dispersion of polyurethane and wax)
RN
     29297-55-0 HCAPLUS
     2-Pyrrolidinone, 1-ethenyl-, polymer with 1-ethenyl-1H-imidazole (9CI)
     (CA INDEX NAME)
          1
     CM
     CRN 1072-63-5
     CMF C5 H6 N2
      CH = CH_2
     CM
           2
```

CRN 88-12-0 CMF C6 H9 N O

```
CH== CH2
    y.==0
RE.CNT 8
RE
(1) Fowler, T; US 5753245 A 1998 HCAPLUS
(2) Mondet, J; US 5753215 A 1998 HCAPLUS (3) Oreal; FR 2528699 A 1983 HCAPLUS
(4) Oreal; EP 0637600 A 1995 HCAPLUS
(5) Oreal; FR 2739288 A 1997 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT
     ANSWER 6 OF 41 HCAPLUS COPYRIGHT 2001 ACS
ΑN
     2001:10585 HCAPLUS
DN
     134:76117
ΤI
     Mascaras comprising film-forming polymers
ΙN
     Bodelin, Sophie
PΑ
     L'oreal, Fr.
     Eur. Pat. Appl., 29 pp.
     CODEN: EPXXDW
DT
     Patent
LΑ
     French
FAN.CNT 1
     PATENT NO.
                      KIND DATE
                                            APPLICATION NO. DATE
                                           EP 2000-401662 20000613
     EP 1064919 A1 20010103
РΤ
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO
                   A1 20010105
5 A1 20010111
     FR 2795635
                                              FR 1999-8412
                                                                 19990630
     WO 2001001935
                                              WO 2000-FR1697
                                                                 20000620
        W: BR, CA, CN, KR, MX
2000006902 A 20010612
     BR 2000006902
                     A
A2
                                              BR 2000-6902
                                                                 20000620
     JP 2001055310
                              20010227
                                              JP 2000-196939
                                                                 20000629
                       A 19990630
W 20000620
PRAI FR 1999-8412
     WO 2000-FR1697
                             20000620
     Mascaras comprising cationic and anionic polymers and a dispersion of
     nonionic film-forming polymers, e.g. C1-6 alkyl acrylate polymers are
     disclosed. A mascara contained carnauba wax 7, bees wax 8, rice ban wax
     7, candelilla wax 2.5, 2-amino-2-methylpropane-1,3-diol 0.2,
     triethanolamine 2.4, stearic acid 5.4, hydrosol. nonionic polymer 1.72, Et acrylate-Me methacrylate copolymer 0.75, dimethicone copolyol 0.2, sodium
     polymethacrylate 0.25, JR-400 0.1, pigments 6, preservatives and water
     q.s. 100 g.
     29297-55-0, Vinylimidazole vinyl pyrrolidone copolymer
     RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
     (Uses)
        (mascaras comprising film-forming polymers)
RN
     29297-55-0 HCAPLUS
     2-Pyrrolidinone, 1-ethenyl-, polymer with 1-ethenyl-1H-imidazole (9CI)
     (CA INDEX NAME)
     СМ
     CRN 1072-63-5
     CMF C5 H6 N2
      сн==сн2
```

```
CRN 88-12-0
     CMF C6 H9 N O
  CH = CH_2
RE.CNT 2
(1) Franjac, D; US 5534247 A 1996 HCAPLUS
(2) Wella Ag; WO 9534271 A 1995 HCAPLUS
L59
     ANSWER 7 OF 41 HCAPLUS COPYRIGHT 2001 ACS
     2000:900207 HCAPLUS
AN
DN
     134:61215
ΤI
     Lipid and detergent-containing topical formulations comprising vesicle
     delivery systems
IN
     Niemiec, Susan M.; Nystrand, Glenn A.; Wang, Jonas C. T.; Ho, Kie L.
PΑ
     Johnson & Johnson Consumer Products, Inc., USA
SO
     Eur. Pat. Appl., 41 pp.
     CODEN: EPXXDW
DТ
     Patent
LA
     English
FAN.CNT 1
     PATENT NO.
                        KIND DATE
                                               APPLICATION NO. DATE
                        A2
                              20001220
     EP 1060732
                                               EP 2000-304542
                                                                  20000526
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO
                       A2 20010123
     JP 2001019634
                                               JP 2000-157251
                                                                  20000526
     CN 1285186
                               20010228
                                               CN 2000-117689
                                                                   20000526
                         Α
     BR 2000002285
                               20010123
                                               BR 2000-2285
                                                                   20000529
                        A
PRAT US 1999-320894
                              19990527
                        Α
     This invention relates to a method for enhancing the transmembrane and/or
     topical penetration of pharmacol. active substances using a certain
     vesicle delivery system as an enhancing agent, and an optional detergent,
     as well as the compns. used therein. Various active agents, such as
     hair growth agents, hair inhibitor agents, anti-acne
     agents, depilatory agents, antiaging agents, and depigmentation agents,
     may be effectively delivered into the skin, hair follicles and
     sebaceous glands using the compns. of the present invention. For example, liposome delivery systems were prepd. contg. as a lipid phase glyceryl
     distearate 33.13-40.91, cholesterol 11.04-13.64, polyoxyethylene-10-
stearyl ether 29.44-36.36, di(soyoylethyl) hydroxyethylammonium
     methosulfate 0-19.03, and elubiol 7.36-9.09 parts, and as an ag. phase
     zinc pyrithione 0-8.57, salicylic acid 0-25.07, and distd. water 74.93-100
     parts, resp.
TΤ
     26590-05-6, Merquat 550
     RL: BUU (Biological use, unclassified); THU (Therapeutic use); BIOL
     (Biological study); USES (Uses)
        (topical liposomes contg. lipids and detergents for delivery of active agents to skin, hair follicles and sebaceous glands)
     26590-05-6 HCAPLUS
RN
     \hbox{2-Propen-1-aminium, $N$, $N$-dimethyl-$N$-2-propenyl-, chloride, polymer with}\\
CN
     2-propenamide (9CI) (CA INDEX NAME)
     CRN 7398-69-8
```

CM 2

CMF C8 H16 N . Cl

```
Me
H_2C = CH - CH_2 - N + CH_2 - CH = CH_2
                Me
               ● c1-
      CM
          2
      CRN 79-06-1
      CMF C3 H5 N O
     0
H_2N-C-CH=CH_2
L59 ANSWER 8 OF 41 HCAPLUS COPYRIGHT 2001 ACS
      2000:741868 HCAPLUS
ΑN
DN
      133:300916
      Hair styling composition containing crosslinked
      silicones
      Pratley, Stuart Keith
ΙN
      Unilever PLC, UK; Unilever NV; Hindustan Lever Limited
PA
SO
      PCT Int. Appl., 27 pp.
      CODEN: PIXXD2
DΤ
      Patent
LA
      English
FAN.CNT 1
      PATENT NO.
                          KIND DATE
                                                   APPLICATION NO. DATE
      -----
      WO 2000061084
                                 20001019
                                                    WO 2000-EP2392
                           A1
                                                                       20000317
           W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU,
               CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,
               MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
           RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,
               CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
7954 A 19990407
PRAI GB 1999-7954
     The invention provides {\bf hair} styling compns., for example creams, gels and esp. aerosol {\bf hair} styling mousses. The compns. contain
      a crosslinked silicone, such as an emulsion of
      crosslinked dimethiconol gum, and a cationic hair
      styling polymer having a cationic charge d. of at least 1 meq/g. The
      compns. provide excellent styling as well as sensory feel.
TТ
      95144-24-4, Polyquaternium 16
      RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
      (Uses)
          (hair styling compn. contg. crosslinked
         silicones)
      95144-24-4 HCAPLUS
RN
      1H-Imidazolium, 1-ethenyl-3-methyl-, chloride, polymer with
CN
      1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)
      CRN 13474-25-4
      CMF C6 H9 N2 . Cl
```

```
Мe
 , N
      CH = CH_2
    ● cl-
*** FRAGMENT DIAGRAM IS INCOMPLETE ***
      CM
      CRN 88-12-0
     CMF C6 H9 N O
  CH== CH2
RE.CNT 5
(1) Dow Corning; EP 0445982 A 1991 HCAPLUS
(2) Murray, A; US 5776444 A 1998 HCAPLUS
(3) Unilever PLC; EP 0818190 A 1998 HCAPLUS
(4) Unilever PLC; WO 0021493 A 2000 HCAPLUS
(5) Unilever PLC; WO 0033797 A 2000 HCAPLUS
L59 ANSWER 9 OF 41 HCAPLUS COPYRIGHT 2001 ACS
ΑN
     2000:723108 HCAPLUS
DN
     133:300913
     Two-composition hair conditioning and styling agent containing
     long-chain esterquats and cationic polymers
IN
     Dubowoj, Polina
PA
     Goldwell G.m.b.H., Germany
so
     Eur. Pat. Appl., 14 pp.
     CODEN: EPXXDW
DT
     Patent
     German
LA
FAN.CNT 1
     PATENT NO.
                         KIND DATE
                                                  APPLICATION NO. DATE
      -----
     EP 1043011 A1 20001011
                                              EP 2000+105303 20000315
          R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
               IE, SI, LT, LV, FI, RO
DE 19916027 A1 20001019
PRAI DE 1999-19916027 A 19990409
                                                  DE 1999-19916027 19990409
     The invention concerns a method for treating freshly shampooed hair with two compns. consecutively in order to condition and to
      obtain shiny and flexible hair. The first compn. contains a
     long-chain quaternary ammonium or amine, preferably an
      esterquat; the second compn. includes film-forming polymers,
     cationic polymers. The second compn. can be a foam aerosol. The long-chain amine is of the general formula: R1-CO-NH-(CH2)-NR2R3; where R1 = C10-C24 alkyl; R2, R3 = C1-C3 alkyl; n = 1-5. Thus an agent contained
      as first compn. the following in wt./wt.%: behenic acid 1.0 ,; Avocadin
```

0.5; long chain **esterquat** 1.0; stearyltrimethylammonium chloride 1.0; 1,2-propanediol 5.0; cococamidopropylbetaine 1.5; C12-C24 alkylpolyglucoside2.5; **urea** 5.0; preservative 0.3; perfume 0.3;

water ad 100. The second compn. contained: ethanol 75; vinylacetate-vinylpyrrolidone copolymer 7.0; quaternary

```
vinylpyrrolidone-dimethylamino-ethylmethacrylate 0.5; Dimethicone Copolyol
     0.5; perfume 0.1; water ad 100.0.
     95144-24-4, Polyquaternium-16
     RL: BSU (Biological study, unclassified); BIOL (Biological study) (two-compn. hair conditioning and styling agent contg.
         long-chain esterquats and cationic polymers)
RN
     95144-24-4 HCAPLUS
     1H-Imidazolium, 1-ethenyl-3-methyl-, chloride, polymer with
     1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)
     CM
     CRN 13474-25-4
     CMF C6 H9 N2 . C1
 Me
      СН=== СН2
    ● cl-
*** FRAGMENT DIAGRAM IS INCOMPLETE ***
     CRN 88-12-0
     CMF C6 H9 N O
  CH = CH_2
RE.CNT 4
(1) Goldwell Gmbh; DE 19751589 C 1999 HCAPLUS
(2) Kao Corp; EP 0640643 A 1995 HCAPLUS
(3) Patel, A; US 5726137 A 1998 HCAPLUS
(4) Schwarzkopf Gmbh Hans; DE 19738303 A 1999 HCAPLUS
L59 ANSWER 10 OF 41 HCAPLUS COPYRIGHT 2001 ACS
     2000:593027 HCAPLUS
ΑN
DN
     133:182720
     Hair-conditioning gel
ΙN
     Schroeder, Thomas; Baumscheiper, Michael; Poppe, Elisabeth
     Hans Schwarzkopf G.m.b.H. & Co. K.-G., Germany
PA
     Ger. Offen., 10 pp.
SO
     CODEN: GWXXBX
DТ
     Patent
LA
     German
FAN.CNT 1
                       KIND DATE
     PATENT NO.
                                               APPLICATION NO. DATE
                              -----
                      A1
A1
PΙ
     DE 19907715
                              20000824
                                              DE 1999-19907715 19990223
                                            DE 1999-1990//10 20000212
WO 2000-EP1158 20000212
                              20000831
     WO 2000049999
         W: AU, BR, CA, CN, CZ, HU, JP, KR, MX, NZ, PL, RU, SI, SK, TR, US
         RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
```

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PRAI DE 1999-19907715 A 19990223
AB An aq. or aq.-alc. gel prepn. for prodn. of a hair-conditioning
     foam comprises .gtoreq.l anionic or cationic gelation agent, a propellant,
     and .gtoreq.1 active agent selected from cationic surfactants, cationic
     polymers, silicones, and protein hydrolyzates. The prepn. can
     be applied to the hair without significant overspray onto the scalp or clothing, and need not contain a thickening agent. The gelation
     agent may be an anionic synthetic (co)polymer contg. carboxylate or
     sulfonate groups, or a cationic synthetic (co)polymer contq.
     quaternary ammonium groups. Thus, a luster-improving hair
     fixative foam compn. contained Stabileze QM (maleic anhydride/Me vinyl
     ether copolymer crosslinked with 1,9-decadiene) 3.0, Dow Corning
     1501 3.0, Luviskol VA 73E [vinylpyrrolidone/vinyl acetate (70:30)
     copolymer] 2.5,, EtOH 18.0, propane-butane mixt. 4.0, and H2O to 100 wt.
     parts.
ΙT
     95144-24-4, Luviquat FC 370
     RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
         (hair-conditioning gel)
RN
     95144-24-4 HCAPLUS
     1H-Imidazolium, 1-ethenyl-3-methyl-, chloride, polymer with 1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)
     CM
     CRN 13474-25-4
     CMF C6 H9 N2 . C1
      CH == CH2
    ● c1-
*** FRAGMENT DIAGRAM IS INCOMPLETE ***
     CM
           2
     CRN 88-12-0
     CMF C6 H9 N O
  сн== сн2
L59
     ANSWER 11 OF 41 HCAPLUS COPYRIGHT 2001 ACS
     2000:553205 HCAPLUS
ΑN
DN
     133:155133
ΤI
     Hair cleansing composition containing cationic polymers and
     soluble polyurethane and/or polyurea
IN
     Cauwet-Martin, Daniele; Restle, Serge
     L'Oreal, Fr.
PA
SO
     Eur. Pat. Appl., 24 pp.
     CODEN: EPXXDW
DT
     Patent
     French
LA
```

```
FAN.CNT 1
     PATENT NO.
                      KIND DATE
                                           APPLICATION NO. DATE
      -----
    EP 1025833
                      A1 20000809
                                           EP 2000-400053 20000111
        R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO
                                        FR 1999-1238
     FR 2788972
                      A1
                            20000804
                                                            19990203
     FR 2788972
                       В1
                            20010413
     AU 725591
                       B2 20001012
                                           AU 2000-13597
                                                            20000127
    CN 1281693
                                           CN 2000-117851
                       Α
                            20010131
                                                            20000202
     JP 2000239130
                      A2
                           20000905
                                           JP 2000-26868
                                                            20000203
PRAI FR 1999-1238
                      Α
                            19990203
    The title hair cleansers are disclosed. A shampoo
     contained sodium lauryl ether sulfate 15.5, Dehyton AB30 2.4, Jaguar C13S
     0.05, Luviset PUR (polyurethane) 1, polydimethylsiloxane 21.7,
     1-(hexadecyloxy)-2-octadecanol/cetyl alc. 2.5, copra acid
     monoisopropanolamide 1, sodium ceotstearyl sulfate 0.75, preservatives and
     water q.s. 100 g.
     29297-55-0, Vinylimidazole vinylpyrrolidone copolymer
     RL: BUU (Biological use, unclassified); BIOL (Biological study); USES .
        (hair cleansing compn. contg. cationic polymers and sol.
        polyurethane and/or polyurea)
RN
     29297-55-0 HCAPLUS
     2-Pyrrolidinone, 1-ethenyl-, polymer with 1-ethenyl-1H-imidazole (9CI)
CN
     (CA INDEX NAME)
    CRN 1072-63-5
    CMF C5 H6 N2
     CH = CH_2
    CM
    CRN 88-12-0
    CMF C6 H9 N O
 сн== cн<sub>2</sub>
RE.CNT 7
RE
(1) Chem, Y; DE 4409189 A 1995 HCAPLUS
(2) Goldwell Gmbh; DE 19723763 A 1998 HCAPLUS
(3) Kao Corp Gmbh; DE 4233385 A 1994 HCAPLUS
(4) Oreal; FR 2749506 A 1997 HCAPLUS
(5) Rhodia Chimie; FR 2756488 A 1998 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT
    ANSWER 12 OF 41 HCAPLUS COPYRIGHT 2001 ACS
    2000:275348 HCAPLUS
ΑN
DN
    132:298839
    Preparations for the topical application of antiandrogens
    Kraemer, Karl Theodor; Bohn, Manfred
IN
    Aventis Pharma Deutschland G.m.b.H., Germany
```

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Ger. Offen., 8 pp.
      CODEN: GWXXBX
DT
      Patent
LA
     German
FAN.CNT 2
      PATENT NO.
                           KIND DATE
                                                     APPLICATION NO. DATE
                                  -----
                           ----
                                  20000427
                                                     DE 1998-19848856 19981023
РΤ
      DE 19848856
                           Al
      WO 2000024366
                           A1
                                  20000504
                                                     WO 1999-EP7660 19991012
          W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU,
                CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,
               MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ,
                BY, KG, KZ, MD, RU, TJ, TM
          RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,
                CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
      EP 1123082
                           A1 20010816
                                                    EP 1999-953787 19991012
          {\tt R:} \quad {\tt AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,} \\
                IE, SI, LT, LV, FI, RO
PRAI DE 1998-19848856 A
                                  19981023
      DE 1999-19900749 A
                                  19990112
      WO 1999-EP7660
                                  19991012
     MARPAT 132:298839
os
GΙ
```

$$R^{1}$$
 $N$ 
 $X$ 
 $Y$ 
 $Z$ 
 $Z$ 
 $R^{2}$ 
 $R^{3}$ 

AB A prepn. contg. .gtoreq.1 physiol. compatible film former, .gtoreq.1 physiol. compatible solvent, .gtoreq.1 plasticizer, and a topical N-heterocyclylphenyl antiandrogen [I; Rl = CN, NO2, halo, carboxyalkyl; R2 = CF3, halo, CN; R3 = O. S, NH; X = C(O), C(S); Y = NR4, CR5C6; Or XY = C(SR4):N; R4 = H, (substituted) C1-6 alkyl, C2-6 alkenyl; R5, R6 = H, (substituted) C1-4 alkyl; Z = O, CMe2] is suitable for the treatment of androgenic alopecia, hirsutism, seborrhea, and acne and can be used in cosmetics. A suitable compn. contained 4-[3-(4-hydroxybutyl)-4,4-dimethyl-2,5-dioxo-1-imidazolidinyl)-2-(trifluoromethyl)benzonitrile 5.0, Luviquat FC 500 (vinylimidazolium methochloride/vinylpyrrolidone copolymer) 2.5, Cremophor RH 410 2.5, 96% EtOH 63.0, and demineralized H2O 27.0 wt.%.

IT 96806-20-1 104452-09-7

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(film-forming agent; prepns. for topical application of antiandrogens)

RN 96806-20-1 HCAPLUS

CN 2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, polymer with sodium 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 7446-81-3 CMF C3 H4 O2 . Na

о || но-- с-- сн=== сн<sub>2</sub>

Na

CM 2

CRN 7398-69-8 CMF C8 H16 N . Cl

$$\begin{array}{c} & \text{Me} \\ | \\ \text{H}_2\text{C} = -\text{CH}_- \text{CH}_2 - \text{N}^{\frac{1}{2}} - \text{CH}_2 - \text{CH} = -\text{CH}_2 \\ | \\ | \\ \text{Me} \end{array}$$

• c1-

RN 104452-09-7 HCAPLUS
CN 1H-Imidazolium, 1-ethenyl-1-methyl-, chloride, polymer with
1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)

CM :

CRN 104452-08-6 CMF C6 H9 N2 . Cl

$$H_2C = CH$$

● C1 -

CM 2

CRN 88-12-0 CMF C6 H9 N O

L59 ANSWER 13 OF 41 HCAPLUS COPYRIGHT 2001 ACS

AN 2000:259958 HCAPLUS

DN 132:298451

TI Hair styling compositions containing silicone and

nonionic surfactant

IN Pratley, Stuart Keith

PA Unilever PLC, UK; Unilever N.V.; Hindustan Lever Limited

SO PCT Int. Appl., 21 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

PATENT NO. KIND DATE

APPLICATION NO. DATE

```
A1 20000420
                                                 WO 1999-EP7427 19990927
     WO 2000021493
          W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU,
               CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL,
               IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD,
              MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY,
               KG, KZ, MD, RU, TJ, TM
          RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,
               CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
     AU 9960900
                         A1 20000501
                                                 AU 1999-60900
                                                                     19990927
                         A
A1
     BR 9914447
                                20010703
                                                 BR 1999-14447
                                                                     19990927
                               20010808
                                                 EP 1999-947470
     EP 1121089
                                                                    19990927
          R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
               IE, SI, LT, LV, FI, RO
                       A 19981014
W 19990927
PRAI GB 1998-22419
     WO 1999-EP7427
     {\tt Hair} styling compns. comprise (i) from 0.1-10%, based on total
     wt., of a non-rigid emulsion polymd. crosslinked
     silicone polymer, in which the percentage of branched monomer
     units in the silicone polymer is 0.05-10%, 0.1-10% hair
     styling polymer, 0.01-5% nonionic surfactant having an HLB value of at
     least 14.5, water, and 0-30% an aerosol propellant. The compns. are typically in the form of an aerosol hair styling mousse or a
     hair styling cream or gel and provide excellent style creation as well as sensory feel. Thus, a hair styling compn. contained HC
     Polymer-3A 3, crosslinked silicone 3, EtOH 8, Nonion
     PS-2500 0.3, LPG 8 and water to 100%.
     95144-24-4, Polyquaternium 16
     RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
      (Uses)
         (hair styling compns. contg. silicone and nonionic
         surfactant)
RN
     95144-24-4 HCAPLUS
     1H-Imidazolium, 1-ethenyl-3-methyl-, chloride, polymer with
CN
     1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)
     CM
     CRN 13474-25-4
     CMF C6 H9 N2 . C1
      сн == сн2
    ● c1-
*** FRAGMENT DIAGRAM IS INCOMPLETE ***
     CM
           2
     CRN 88-12-0
```

CMF C6 H9 N O

```
CH== CH2
RE.CNT 4
RE
(1) Dow Corning Corp; EP 0445982 A 1991 HCAPLUS
(2) Unilever, P; WO 9631188 A 1996 HCAPLUS
(3) Unilever, P; EP 0818190 A 1998 HCAPLUS
(4) Unilever, P; WO 9813011 A 1998 HCAPLUS
L59
    ANSWER 14 OF 41 HCAPLUS COPYRIGHT 2001 ACS
AN
     2000:83148 HCAPLUS
DN
     132:141678
TΙ
     Hair-strengthening agent with amphoteric and acidic polymers
     Jahed, Mehrdad; Karlen, Thomas
TN
PΑ
     Wella A.-G., Germany
SO
     Ger., 14 pp.
     CODEN: GWXXAW
DT
     Patent
     German
LA
FAN.CNT 1
     PATENT NO.
                    KIND DATE
                                            APPLICATION NO. DATE
                     C1
ΡI
                            20000203
     DE 19833516
                                            DE 1998-19833516 19980725
     WO 2000006092
                       A1
                            20000210
                                            WO 1999-EP5289 19990723
         W: BR, JP, US
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
             PT, SE
                                            EP 1999-940041 19990723
     EP 1017359
                           20000712
                       Α1
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, FI
     BR 9906628
                            20000801
                                            BR 1999-6628
                                                             19990723
                          19980725
PRAI DE 1998-19833516 A
     WO 1999-EP5289
                      W
                           19990723
     A hair-strengthening compn. contains a mixt. of (A) .gtoreq.1
     amphoteric copolymer of .gtoreq.1 quaternary ammonium compd. and
     .gtoreq.1 acidic group-contg. monomer and (B) .gtoreq.1 polymer of an
     acidic group-contg. monomer which does not contain quaternary
     amino groups. The acidic groups may or may not be neutralized. The
     compn. gives the hair excellent wet combability and maintains
     the hair style well after drying, without stressing the
     hair. Thus, an aerosol spray contained Gantrez ES 425 (50% in EtOH) 10.00, Merquat 2001 (20% in H2O) 1.00, EtOH 40.00, H2O
     29.00, and Me20 20.00 g.
     95144-24-4, Luviquat FC 905
     RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
        (hair-strengthening agent with amphoteric and acidic
        polymers)
     95144-24-4 HCAPLUS
RN
CN
     1H-Imidazolium, 1-ethenyl-3-methyl-, chloride, polymer with
     1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)
     CM
         1
     CRN 13474-25-4
```

CMF C6 H9 N2 . C1

## ● c1-

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CRN 88-12-0 CMF C6 H9 N O

```
RE.CNT 3
```

- (1) Anon; EP 0330174 A1 HCAPLUS
- (2) Anon; EP 0841060 A2 HCAPLUS
- (3) Anon; DE 4034315 A1 HCAPLUS
- L59 ANSWER 15 OF 41 HCAPLUS COPYRIGHT 2001 ACS
- 1999:818984 HCAPLUS ΑN
- DN 132:69066
- Hair composition containing a cationic polymer and an acrylic TΙ terpolymer
- PA
- L'Oreal, Fr. Eur. Pat. Appl., 18 pp. SO

CODEN: EPXXDW

- DT Patent
- French
- FAN.CNT 1

			_																
PATENT NO.			KIND		DATE			API	PLIC	CATIO	ON NO	ο.	DATE						
	ΡI	ΕP	9669	47		A.	1	1999	1229		EP	199	9-40	0143	1	19990	0611		
			R:	ΑT,	BE,	CH,	DE,	DK,	ES,	FR,	GB, (	GR,	IT,	LI,	LU,	NL,	SE,	MC,	PT,
				ΙE,	SI,	LT,	LV,	FI,	RO										•
		FR	2779	640		A.	1	1999	1217		FR	199	8-75	513		19980	0615		
		FR	2779	640		B.	1	2000	0804										
		ΑU	7120	47		В	1	1999	1028		AU	199	99-33	3966		19990	0609		
		CN	1247	736		Α		2000	0322		CN	199	99-13	1089	4	19990	0614		
		BR	9902	764		Α		2000	0509		BR	199	99-27	764		19990	0614		
		US	6214	326		B.	1	2001	0410		US	199	99-33	32004	4	19990	0614		
		JΡ	2000	0075	35	A.	2	2000	0111		JP	199	99-16	5824	4	19990	0615		
	PRAI	FR	1998	-7513	3	Α		1998	0615										
	ת ת	The	. +:+	. 1			سائنس		ــــ	70 -1	L				- ^				

The title compn. is disclosed. A shampoo contained a 25% dispersion of methacrylic acid-Me acrylate-ethoxylated behenyl dimethylmetaisopropenylbenzyl isocyanate terpolymer 1, sodium lauryl ether sulfate 15, cocoacyl betaine 2.5, hydroxypropylguar tri-Et ammonium chloride (Jaguar C13S) 0.1, perfume, preservative, and water q.s. 100 g,

29297-55-0, Vinylpyrrolidone vinylimidazole copolymer RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

(hair compn. contg. cationic polymer and acrylic terpolymer)

```
29297-55-0 HCAPLUS
RN
CN
     2-Pyrrolidinone, 1-ethenyl-, polymer with 1-ethenyl-1H-imidazole (9CI)
    · (CA INDEX NAME)
     CM
          1
     CRN 1072-63-5
     CMF C5 H6 N2
      СН== СН2
     CM
           2
     CRN 88-12-0
     CMF C6 H9 N O
  CH = CH_2
RE.CNT 1
RE
(1) National Starch & Chemical Investment; EP 0824914 A 1998 HCAPLUS
L59 ANSWER 16 OF 41 HCAPLUS COPYRIGHT 2001 ACS
     1999:783913 HCAPLUS
AN
DN
     132:26674
     Liquid aqueous composition with improved stability
ТΙ
IN
     Parle-Schmitz, Elizabeth K.
PΑ
     Colgate-Palmolive Co., USA
SO
     PCT Int. Appl., 31 pp.
     CODEN: PIXXD2
DΤ
     Patent
LA
     English
FAN.CNT 1
     PATENT NO.
                         KIND DATE
                                                 APPLICATION NO. DATE
ΡI
     WO 9962493
                          A1 19991209
                                                 WO 1999-US11834 19990527
          W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ,
               DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS,
               JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK,
              MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD,
               RU, TJ, TM
          RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK,
               ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

83 A 20001212 US 1998-192252 19981113
     US 6159483
     AU 9942150
                                19991220
                                                 AU 1999-42150
                          A1
                                                                     19990527
     BR 9910850
                          Α
                                20010220
                                                  BR 1999-10850
                                                                     19990527
     EP 1083878
                          A1 20010321
                                                 EP 1999-925971
                                                                     19990527
          R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT, IE, FI, RO
2000006082 A 20001130 NO 2000-6082 20001130
     NO 2000006082
                                                 NO 2000-6082
                                                                     20001130
                        A
PRAI US 1998-87534
                          P
                                19980601
     US 1998-192252
                          Α
                                19981113
     WO 1999-US11834 W
                              19990527
     A liq. aq. compn. comprises: (a) a skin cleansing effective amt. of a surfactant or mixt. thereof; (b) a silicone fluid at 0.1-8\ \% of
```

the compn.; (c) a hydrocarbonaceous material at 0.1-8 % of the compn.; (d) a cationic polymer at 0.02-1 % of the compn.; (e) a combination of a hydroxyalkyl cellulose and a copolymer of a long-chain alkyl acrylate monomer and one or more monomers of acrylic acid, methacrylic acid and one or more of a Me, Et or Pr ester of the acid(s) wherein the copolymer is crosslinked with an allylic ether of a polyol, the combination in sufficient quantities to bring about a stabilized compn. as visually evaluated, and (f) the remainder water. A skin cleanser contained Na laureth sulfate 7.6, cocoamidopropylbetaine 2.1, decylpolyglucoside 0.6, dimethicone 1, petrolatum 2, **Poquat**-7 0.2, Methocel E4M 0.5m Pemulene TR-1 0.5, and water q.s. to 100 %. 26590-05-6, Polyquaternium 7

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES

(aq. cleansers with improved stability contg. surfactants and silicones and cationic polymers and petrolatum)

26590-05-6 HCAPLUS ŔΝ

CN 2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, polymer with 2-propenamide (9CI) (CA INDEX NAME)

CM

CRN 7398-69-8 CMF C8 H16 N . C1

• c1-

CM

CRN 79-06-1 CMF C3 H5 N O

RE.CNT 6

RE

- (1) Alcon Lab Inc; EP 0663208 A 1995 HCAPLUS
- (2) Elliott, R; WO 9617916 A 1996 HCAPLUS
- (3) Elliott, R; WO 9637588 A 1996 HCAPLUS (4) Hoeg, A; US 5441732 A 1995 HCAPLUS
- (5) Procter & Gamble; WO 9308787 A 1993 HCAPLUS
- ALL CITATIONS AVAILABLE IN THE RE FORMAT
- ANSWER 17 OF 41 HCAPLUS COPYRIGHT 2001 ACS
- AN 1999:659023 HCAPLUS
- DN 131:291034
- ΤI Nonionically derivatized starches and their use in non-aerosol, low volatile organic compound hair fixative compositions
- Vitale, Melissa J.; Tolchinsky, Maria; Martino, Gary T.; Solarek, Daniel B.; Cottrell, Ian W.
- National Starch and Chemical Investment Holding Corporation, USA PA
- SO Eur. Pat. Appl., 15 pp.
- CODEN: EPXXDW DΤ Patent
- English LA

```
FAN.CNT 1
     PATENT NO.
                        KIND DATE
                                                 APPLICATION NO. DATE
       -----
     EP 948960
                        A2 19991013
                                                 EP 1999-106173 19990408
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
               IE, SI, LT, LV, FI, RO
     NO 9901661
                                19991011
                                                 NO 1999-1661
                                                                     19990408
      JP 11322552
                         A2 19991124
                                                 JP 1999-100994 19990408
     CN 1246328
                          Α
                                20000308
                                                 CN 1999-107271
                                                                     19990408
                          A1 19991021
                                                 AU 1999-23676
     AU 9923676
                                                                     19990409
PRAI US 1998-57825
                       A 19980409
A 19990329
     US 1999-280734
     The present invention is directed to low VOC, non-aerosol hair
     cosmetic compns., which contain nonionically modified starches.
The starch may be addnl. hydrolyzed particularly enzymically hydrolyzed.
     Further, the starch may be modified using ionic substituents. Use of such
      starches is novel and advantageous in that they provide a clear soln. with
      a low viscosity, and good pump spray characteristics. Further, the
     resultant compn. provides a clear film which is not tacky, good stiffness, and improved humidity resistance. A soln. of 5 g PVP in 900 of water was added to 100 amylose corn starch which was modified by propylene
      oxide and neutralized. The slurry was heated at 150-155.degree.
      and spray dried. Hair spray soln. contq. the above modified
     starch 5 and water 95% was prepd. 26590-05-6, Polyquaternium 7
      RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
      (Uses)
         (nonionically derivatized starches and their use in non-aerosol, low
         volatile org. compd. hair fixative compns.)
RN
     26590-05-6 HCAPLUS
CN
     2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, polymer with
     2-propenamide (9CI) (CA INDEX NAME)
     CM
           1
     CRN 7398-69-8.
     CMF C8 H16 N . Cl
               Ме
H_2C = CH - CH_2 - N^{+}
                   - cн<sub>2</sub>- сн== сн<sub>2</sub>
               Me
              ● c1-
```

CM 2

CRN 79-06-1 CMF C3 H5 N O

 $_{||}^{O}$   $_{||}^{H_2N-C-CH==CH_2}$ 

L59 ANSWER 18 OF 41 HCAPLUS COPYRIGHT 2001 ACS

AN 1999:659022 HCAPLUS

DN 131:276764

TI Nonionically derivatized starches and their use in low VOC, polyacrylic acid-containing hair fixative compositions

IN Vitale, Melissa J.; Tolchinsky, Maria; Martino, Gary T.; Solarek, Daniel B.; Cottrell, Ian W.

```
National Starch and Chemical Investment Holding Corporation, USA
PA
SO
     Eur. Pat. Appl., 10 pp.
     CODEN: EPXXDW
DT
     Patent
     English
LA
FAN.CNT 2
     PATENT NO.
                      KIND DATE
                                            APPLICATION NO. DATE
     ______
     EP 948959
                   A2 19991013
                                            EP 1999-106172 19990408
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO
     US 20010018046 A1 20010830 US 1998-57826 A 19980409
                                             US 1999-277784 19990329
PRAI US 1998-57826
     US 1999-277784 A 19990329
A low VOC, non-aerosol, polyacrylic acid-contg. hair
     cosmetic compns. which contain nonionically derivatized starches,
     particularly those derivatized by alkylene oxides are disclosed.
     The derivatized starch may be hydrolyzed, particularly enzymically hydrolyzed by at least one endo-enzyme. In addn., the starch may be acid
     cationically modified with a low degree of substitution. Use of such
     starches is novel and advantageous in that they are compatible with
     polyacrylic acid, providing a clear, soln. with a stable viscosity.
     Further, the resultant compn. provides a clear film which is not tacky,
     good stiffness, and improved humidity resistance. A 40% soln. of starch
     modified with propylene oxide was treated with 2.5%
     3-chloro-2-hydroxypropyltrimethyl ammonium chloride followed by adjustment
     of pH to 5.5 and heating until fully gelatinized, cooled, filtered, and
     neutralized by 2-amino-2-methyl-1-propanol. A hair gel
     contained above starch 3.0, Carbopol 0.6, triethanolamine 0.6, and water
     95.8%.
ΙT
     26590-05-6, Polyquaternium 7
     RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
        (nonionically derivatized starches and their use in low volatile org.
        compd., polyacrylic acid-contg. hair fixative compns.)
RN
     26590-05-6 HCAPLUS
     2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, polymer with
     2-propenamide (9CI) (CA INDEX NAME)
     CM
     CRN 7398-69-8
     CMF C8 H16 N . Cl
              Me
H_2C = CH - CH_2 - N + CH_2 - CH = CH_2
              Me
            ● c1-
     CM
     CRN 79-06-1
     CMF C3 H5 N O
     0
H2N-C-CH=CH2
```

SEARCHED BY SUSAN HANLEY Phone: 305-4053

L59 ANSWER 19 OF 41 HCAPLUS COPYRIGHT 2001 ACS

```
ΑN
     1999:659021 HCAPLUS
     131:291033
DN
ΤI
     Non-ionically derivatized starches and their use in aerosol hair
      fixative compositions
     Paul, Charles W.; Henley, Matthew J.; Altieri, Paul A.; Vitale, Melissa
IN
      J.; Tolchinsky, Maria; Solarek, Daniel B.; Cottrell, Ian W.
PΑ
     National Starch and Chemical Investment Holding Corporation, USA
SO
     Eur. Pat. Appl., 17 pp.
     CODEN: EPXXDW
DТ
     Patent
T.A
     English
FAN.CNT 2
     PATENT NO.
                        KIND DATE
                                                APPLICATION NO. DATE
                         A2 19991013
     EP 948958
                                                EP 1999-106171 19990408
PΙ
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
     IE, SI, LT, LV, FI, RO
US 2001007655 A1 20010712
                                                US 1999-280614 19990329
     US 1998-57717 A 19980409
US 1999-280614 A 19990329
PRAI US 1998-57717
     Low volatile org. compd. aerosol hair cosmetic compns.
     which contain nonionically derivatized starches optionally hydrolyzed
     and/or ionically modified are disclosed. Such compns. provide a clear
     soln. with a low viscosity, good spray characteristics, a clear, non-tacky film, good stiffness, and improved humidity resistance. A 40% aq. soln.
     of waxy starch was prepd. and mixed with 25% sodium sulfate soln., the pH
     was then adjusted to 11.5. The mixt. was treated with 7.5% propylene oxide and the pH was adjusted to 5.5. A soln. of 5 g PVP in 900 g
     of water was added to 100 g of starch soln. and heated at 150-155.degree.,
     then spray dried and neutralized with 2-amino-2-methyl-1-propanol. A
     hair spray soln. contained above starch 7.5, di-Me ether 5,
propellant 33 and water 62%.
     26590-05-6, Polyquaternium 7
     RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
      (Uses)
         (non-ionically derivatized starches and their use in aerosol
         hair fixative compns.)
RN
     26590-05-6 HCAPLUS
     2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, polymer with
CN
     2-propenamide (9CI) (CA INDEX NAME)
     CM
         1
     CRN 7398-69-8
CMF C8 H16 N . Cl
               Me
H_2C = CH - CH_2 - N + CH_2 - CH = CH_2
             ● cl-
     CM
     CRN 79-06-1
     CMF C3 H5 N O
H_2N-C-CH = CH_2
```

```
L59 ANSWER 20 OF 41 HCAPLUS COPYRIGHT 2001 ACS
AN
     1999:464164 HCAPLUS
     131:120589
DN
     Hair dye composition containing a laccase
TΙ
IN
     Lang, Gerard; Cotteret, Jean
     L'Oreal, Fr.
PA
SO
     PCT Int. Appl., 37 pp.
     CODEN: PIXXD2
DT
     Patent
     French
LA
FAN.CNT 1
     PATENT NO.
                        KIND DATE
                                                APPLICATION NO. DATE
                         A1 19990722
     WO 9936035
                                                WO 1998-FR2794
                                                                   19981218
          W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE,
              DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG,
              KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX,
              NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
          RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI,
              CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
                         A1 19990716
B1 20010223
     FR 2773477
                                                FR 1998-254
                                                                   19980113
     FR 2773477
                               20010223
                         B1
     AU 9917666
                               19990802
                                                AU 1999-17666
                         A1
                                                                   19981218
     AU 729022
                         B2
                               20010125
     BR 9814740
                               20001017
                                                BR 1998-14740
                         Α
                                                                   19981218
     EP 1047377
                         A1
                               20001102
                                                EP 1998-962518
                                                                   19981218
     EP 1047377
                         В1
                               20010627
          R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
              IE, FI
                               19980113
PRAI FR 1998-254
     WO 1998-FR2794
                         W
                              19981218
     The invention concerns a ready-to-use compn. for dyeing human keratinous
     fibers and more particularly human hair, comprising (a) at least
     an enzyme such as laccase; (b) at least a cationic substance or particular
     amphoteric polymer; (c) at least an oxidn. coloring agent, as well as the
     dyeing methods using said compn. 53694-17-0, Merquat 280
     RL: BUU (Biological use, unclassified); NUU (Nonbiological use,
     unclassified); PEP (Physical, engineering or chemical process); BIOL
     (Biological study); PROC (Process); USES (Uses)
         (hair dye compn. contg. a laccase)
     53694-17-0 HCAPLUS
RN
CN
     2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, polymer with
     2-propenoic acid (9CI) (CA INDEX NAME)
     CM
     CRN 7398-69-8
CMF C8 H16 N . Cl
               Me
              - 'n<sup>+</sup> сн<sub>2</sub>- сн<u>--</u> сн<sub>2</sub>
H_2C = CH - CH_2
               Ме

    C1 −

     CM
           2
     CRN 79-10-7
```

CMF C3 H4 O2

```
0
HO- C-- CH= == CH2
     26590-05-6, Acrylamide-diallyldimethylammonium chloride copolymer
     RL: BUU (Biological use, unclassified); PEP (Physical, engineering or chemical process); BIOL (Biological study); PROC (Process); USES (Uses)
     (hair dye compn. contg. a laccase)
RN
     \hbox{2-Propen-1-aminium, $N,N-$dimethyl-$N-2-$propenyl-, chloride, polymer with}\\
     2-propenamide (9CI) (CA INDEX NAME)
     CM
     CRN 7398-69-8
     CMF C8 H16 N . Cl
               Ме
H_2C = CH - CH_2 - N + CH_2 - CH = CH_2
               Me
             ● c1-
     CM
     CRN 79-06-1
CMF C3 H5 N O
H_2N-C-CH CH_2
RE.CNT 4
RE
(1) Oreal; EP 0557203 A 1993 HCAPLUS
(2) Oreal; FR 2694018 A 1994 HCAPLUS
(3) Oreal; EP 0673641 A 1995 HCAPLUS
(4) Perma Sa; EP 0504005 A 1992 HCAPLUS
L59 ANSWER 21 OF 41 HCAPLUS COPYRIGHT 2001 ACS
AN
     1999:172568 HCAPLUS
DN
     130:213439
     Cosmetic conditioners containing polyglycol ester
TΙ
     sulfates and polymers
ΤN
     Hensen, Hermann; Fabry, Bernd; Kahre, Joerg
PA
     Henkel Kommanditgesellschaft auf Aktien, Germany
SO
     PCT Int. Appl., 21 pp.
     CODEN: PIXXD2
DT
     Patent
     German
T.A
FAN.CNT 18
     PATENT NO.
                        KIND DATE
                                               APPLICATION NO. DATE
PΙ
     WO 9909935
                         A2
                               19990304
                                               WO 1998-EP5211
                                                                 19980817
     WO 9909935
                         A3
                              19990610
         W: JP, US
          RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
```

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CN 1223564
                             19990721
                                             CN 1997-195236
                                                               19970530
     DE 19736906
                              19990304
                                             DE 1997-19736906 19970825
                        Α1
     DE 19741911
                              19990114
                                              DE 1997-19741911 19970925
                        C1
     DE 19828021
                        C1
                              19990819
                                              DE 1998-19828021 19980624
     DE 19830374
                        Α1
                              20000113
                                              DE 1998-19830374 19980708
     WO 9910319
                        Α1
                              19990304
                                             WO 1998-EP5209
                                                              19980817
         W: AU, BG, BR, BY, CA, CN, CZ, HU, ID, IS, JP, KR, LT, LV, MX, NO,
         NZ, PL, RO, RU, SI, SK, TR, UA, US
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
             PT, SE
     AU 9894354
                        Α1
                              19990316
                                             AU 1998-94354
                                                                19980817
     EP 1007508
                              20000614
                                             EP 1998-947432
                        A1
                                                                19980817
         R: DE, ES, FR, IT
     JP 2001514166
                        Т2
                              20010911
                                              JP 2000-507649
                                                                19980817
     US 6235913
                              20010522
                                              US 2000-486413
                                                                20000522
PRAI DE 1997-19736906 A
                              19970825
     DE 1997-19741911 A
                              19970925
     DE 1998-19828021 A
                              19980624
     DE 1998-19830374 A
                              19980708
                             19980817
     WO 1998-EP5209
     MARPAT 130:213439
OS
     \textbf{Cosmetic} \text{ prepns. contg. polyglycol ester sulfates R1CO2(AO)} \\ \textbf{xSO3X}
AB
     (R1CO = C6-22 \text{ aliph. acyl; } A = CH2CH2, CH2CHMe, CHMeCH2; X = alkali metal,
     alk. earth, NH4, alkylammonium, alkanolammonium, glucammonium; x = 1-3)
     and cationic, anionic, amphoteric, zwitterionic, or nonionic polymers make
     hair easier to comb and make skin soft to the touch. When in the
     form of emulsions, these prepns. show good stability during storage at
     elevated temps. Thus, a conditioning shampoo contg. ethylene
     glycol monolaurate Na sulfate 1.0, polyglyceryl-2 bis(polyhydroxystearate)
     0.8, cetearyl alc. 3.0, glyceryl stearate 0.5, octyldodecanol 1.0,
     lauryldimonium hydroxypropyl hydrolyzed collagen 0.5, and H2O to 100 parts
     markedly improved the wet and dry combability and bending strength of the
     26590-05-6, Polyquaternium-7 29297-55-0D,
     quaternized 53694-17-0
     	ilde{	t RL}: BUU (Biological use, unclassified); BIOL (Biological study); USES
     (Uses)
        (cosmetic conditioners contg. polyglycol ester
        sulfates and polymers)
     26590-05-6 HCAPLUS
     2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, polymer with
     2-propenamide (9CI) (CA INDEX NAME)
     CM
     CRN 7398-69-8
     CMF C8 H16 N . C1
              Мe
              N<sup>+</sup>
H_2C = CH - CH_2
                 - cн<sub>2</sub>- сн== сн<sub>2</sub>
              Me
             • c1-
     CM
          2
     CRN 79-06-1
     CMF C3 H5 N O
```

RN 29297-55-0 HCAPLUS

CN 2-Pyrrolidinone, 1-ethenyl-, polymer with 1-ethenyl-1H-imidazole (9CI) (CA INDEX NAME)

CM :

CRN 1072-63-5 CMF C5 H6 N2

CM 2

CRN 88-12-0 CMF C6 H9 N O

RN 53694-17-0 HCAPLUS

CN 2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, polymer with 2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 7398-69-8 CMF C8 H16 N . Cl

$$\begin{array}{c} \text{Me} \\ \text{H}_2\text{C} = \text{CH} - \text{CH}_2 - \text{N} + \text{CH}_2 - \text{CH} = \text{CH}_2 \\ \text{Me} \end{array}$$

● C1-

CM 2

CRN 79-10-7 CMF C3 H4 O2

```
L59 ANSWER 22 OF 41 HCAPLUS COPYRIGHT 2001 ACS
AN
     1999:166502 HCAPLUS
     130:227503
     Cosmetic hair compositions containing an amine
ΤI
     polyoxyalkylene silicon block and a conditioning agent
ΤN
     Restle, Serge; Cauwet-Martin, Daniele
PΑ
     L'Oreal, Fr.
SO
     PCT Int. Appl., 50 pp.
     CODEN: PIXXD2
DТ
     Patent
LA
     French
FAN.CNT 1
     PATENT NO.
                        KIND DATE
                                               APPLICATION NO. DATE
                              -----
                        A1 19990304
                                               WO 1998-FR1845 19980824
PТ
     WO 9909939
         W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE,
              DK, EE, ES, FI, GB, GE, GH, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO,
              NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
          RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES,
              FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
                        A1 19990226
                                               FR 1997-10617
     FR 2767473
                                                                  19970825
     FR 2767473
                         В1
                               20000310
     AU 9890785
                               19990316
                                               AU 1998-90785
                                                                  19980824
                         Α1
     AU 729045
                         В2
                               20010125
     EP 1009366
                              20000621
                                               EP 1998-942778
                                                                 19980824
                         Α1
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI
     JP 2001513534
                         T2
                             20010904
                                               JP 2000-507331 19980824
                               19970825
PRAI FR 1997-10617
                         Α
     WO 1998-FR1845
                        W
                              19980824
     Novel compns. contg. in a cosmetically acceptable medium at least one
     conditioning agent selected among poly-.alpha.-olefins, fluorinated oils,
     fluorinated waxes, fluorinated gums, carboxylic acid esters, cationic
     polymers, silicon insol. in the medium, mineral, vegetable or animal oils and at least one (AB)n type polyoxyalkylene amine
     silicon, A being a polysiloxane block and B being a
     polyoxyalkylene block comprising at least an amine group. Said
     combination provides cosmetic properties (smoothness, softness)
     greatly improved compared to the properties obtained by one or the other
     of the constituents used on its own. Said compns. are used for washing
     and/ conditioning hair. A shampoo contained sodium lauryl ether sulfate 17, Dehyton AB30 3, amine polyoxyalkylene
     silicon block (Silsoft A843) 1.5, Jaguar C13S 0.5, copra acid
     monoisopropanolamide 2, sodium hydroxide q.s. pH = 8.5, and water q.s. 100
ΤТ
     26590-05-6, Acrylamide-diallyldimethyl ammonium chloride copolymer
     RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
         (cosmetic hair compns. contg. amine polyoxyalkylene
        silicon block and conditioning agent)
     26590-05-6 HCAPLUS
RN
CN
     2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, polymer with
     2-propenamide (9CI) (CA INDEX NAME)
     CRN 7398-69-8
     CMF C8 H16 N . C1
```

```
Me
н2с == сн- сн2 - № +
                   - cн<sub>2</sub>- сн== сн<sub>2</sub>
               Me
              ● c1-
     CM
     CRN 79-06-1
     CMF C3 H5 N O
H2N-C-CH=CH2
RE.CNT 5
RE
(1) L'Oreal; EP 0643961 A 1995 HCAPLUS
(2) L'Oreal; EP 0684041 A 1995 HCAPLUS
(3) L'Oreal; FR 2709954 A 1995 HCAPLUS
(4) L'Oreal; FR 2709955 A 1995 HCAPLUS
(5) Nippon Unicar; EP 0492657 A 1992 HCAPLUS
L59 ANSWER 23 OF 41 HCAPLUS COPYRIGHT 2001 ACS
     1999:81688 HCAPLUS
AN
DN
     130:129756
     Cross-linked cationic copolymers with
TΙ
     N-vinylimidazoles
IN
     Zeitz, Katrin; Hoessel, Peter; Dieing, Reinhold; Sanner, Axel
PA
     BASF A.-G., Germany
     Ger. Offen., 6 pp.
SO
     CODEN: GWXXBX
DT
     Patent
     German
FAN.CNT 1
     PATENT NO.
                         KIND DATE
                                                 APPLICATION NO. DATE
                         ____
PΙ
     DE 19731907
                         A1
                                19990128
                                                 DE 1997-19731907 19970724
                          A2 19990506
A3 20000112
     EP 913143
                                                 EP 1998-111949 19980629
     EP 913143
                         А3
          R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
              IE, SI, LT, LV, FI, RO
     JP 11079954
                         A2 19990323
19970724
                                                 JP 1998-206334 19980722
PRAI DE 1997-19731907
     Copolymers produced by radical polymn. of an N-vinylimidazole or quaternized N-vinylimidazole 1-99.99, a neutral or basic
     water-sol. monomer 0-98.99, an unsatd. acid or
     unsatd. anhydride 0-49.99, an addnl. monomer 0-50, and a
     bi- or polyfunctional monomer 0.01-10 wt.% and subsequent
     quaternization or protonation (in case a nonquaternized
     N-vinylimidazole was used) have excellent hair-conditioning and
     gel-forming properties and are useful as hair fixatives. Thus,
      a mixt. of H2O 560, vinylpyrrolidone 320, vinylimidazolium methosulfate
     160, tripropylene glycol diacrylate 1.2, and 2,2'-azobis(2-amidinopropane)-2HCl was polymd. at 70.degree. under N2 for 1 h. This copolymer (1.5% in H2O) formed a clear gel with a viscosity of 26,000 mPa s with very good
      fixative action and conferred good combability on the hair.
TТ
     219916-98-0
      RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
      (Uses)
```

(crosslinked cationic copolymers with N-vinylimidazoles)

219916-98-0 HCAPLUS 2-Propenoic acid, (1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] ester, polymer with 1-ethenyl-1H-imidazole mono(methyl sulfate) and 1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME) CN CRN 42978-66-5 CMF C15 H24 O6 CCI IDS CDES \* H2C== CH- "-O-CH2-CH2-O-CH2-CH2-O-CH2-CH2-O-"-CH== CH2 3 (D1-Me) CM 2 CRN 88-12-0 CMF C6 H9 N O сн== сн2 CM 3 CRN 161088-76-2 CMF C5 H6 N2 . C H4 O4 SCM CRN 1072-63-5 CMF C5 H6 N2 сн == сн2 CM 5 CRN 75-93-4 CMF C H4 O4 S

```
L59 ANSWER 24 OF 41 HCAPLUS COPYRIGHT 2001 ACS
ΑN
     1998:635635 HCAPLUS
DN
     129:280773
TΤ
     Oxidative hair dye compositions containing 2-hydroxyphenyl
     benzotriazole derivatives and surfactants
TN
     Hawkins, Geoffrey R.; Dolak, Terence M.; Gutkowski, Glenn A.
     Revlon Consumer Products Corp., USA
SO
     PCT Int. Appl., 49 pp.
     CODEN: PIXXD2
חיי
     Patent
LA
     English
FAN.CNT 1
     PATENT NO.
                       KIND DATE
                                             APPLICATION NO. DATE
                             -----
                     ----
                                             -----
                       A1 19980924
PΤ
     WO 9841186
                                             WO 1998-US5207
                                                              19980317
         W: AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GE, GH,
             GW, HU, ID, IL, IS, JP, KG, KP, KR, KZ, LC, LK, LR, LT, LV, MD,
             MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UZ, VN, YU, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI,
             FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM,
             GA, GN, ML, MR, NE, SN, TD, TG
                       心,
A
     US 5843193
                             19981201
                                             ·US 1997-819809
                                                               19970318
     AU 9865613
                             19981012
                                             AU 1998-65613
                                                               19980317
                        B2 20001005
A1 19990428
     AU 725070
     EP 910330
                                             EP 1998-911725
                                                               19980317
         R: AT, BE, CH, DE, DK, ES, FR, GB, IT, LI, LU, NL, SE, IE, FI
9804784 A 19990817 BR 1998-4784 19980317
     BR 9804784
                      A
T2
                                             JP 1998-540717
     JP 2001505923
                             20010508
                                                               19980317
     ZA 9802287
                        A 19980923
                                             ZA 1998-2287
                                                               19980318
     NO 9805354
                             19990118
                                             NO 1998-5354
                                                               19981117
                        Α
PRAI US 1997-819809
                             19970318
                        Α
     WO 1998-US5207
                             19980317
                        W
OS
     MARPAT 129:280773
     A compn. for oxidative dyeing of hair comprises, by wt. of the
     total compn.; 0.0001-20 % of at least one primary intermediate and at
     least one coupler for the formation of oxidn. dyes, 0.01-10 % of a
     2-hydroxyphenyl benzotriazole compd. which absorbs UV radiation in the
     wavelength range of 200 to 400 nm, 0.5-20 % surfactant, and 10-65 % water.
     A two component kit contg. the hair dye compn. and a developer,
     and a method for oxidative dyeing of hair with said kit is also
     disclosed. A hair dye compn. contained ammonium lauryl sulfate
     2.00, propylene glycol 4.00, ethoxydiglycol 2.00, monoethanolamine 5.00, seaweed ext. 0.80, EDTA 0.80, isoascorbic acid 0.20, sodium sulfite 0.50,
     primary intermediates and couplers 5.00, oleic acid 12.50,
     cetearyl alc. 4.00, emulsifying wax 2.00, oleth-20 1.00, steareth-21 0.70,
     meadowfoam seed oil 0.75, oleyl alc. 0.40, Polyquaternium-10
     0.20, Polyquaternium-28 0.50, mica/titanium dioxide
     0.30, hydrolyzed wheat protein 1.00, Cibafast W liq. 1.00, fragrance 5.00,
     wheat amino acids 1.00, and water q.s. 100%.
     26590-05-6, Acrylamide-dimethyldiallylammonium chloride copolymer
     RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
     (Uses)
        (oxidative hair dye compns. contg. hydroxyphenyl
        benzotriazole derivs. and surfactants)
RN
     26590-05-6 HCAPLUS
     2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, polymer with
     2-propenamide (9CI) (CA INDEX NAME)
     CM
     CRN 7398-69-8
     CMF C8 H16 N . Cl
```

```
Me
H_2C = CH - CH_2 - N^{+} - CH_2 - CH = CH_2
              Ме
             • c1-
     CM
     CRN 79-06-1
     CMF C3 H5 N O
H_2N-C-CH=CH_2
L59 ANSWER 25 OF 41 HCAPLUS COPYRIGHT 2001 ACS
     1998:298127 HCAPLUS
AN
DN
     129:8391
ΤI
     Hair treatment agent containing shellac and synthetic polymer
     for strengthening of hair
Schmenger, Juergen; Wendel, Harald; Franzke, Michael
IN
     Wella A.-G., Germany
PA
SO
     Ger., 8 pp.
     CODEN: GWXXAW
DT
     Patent
LA
     German
FAN.CNT 1
     PATENT NO.
                       KIND DATE
                                              APPLICATION NO. DATE
                       ____
     DE 19645909
                        C1
                             19980507
                                              DE 1996-19645909 19961107
                                              JP 1997-286085 19971001
EP 1997-118298 19971022
     JP 10139634
                            19980526
19980513
                        A2
     EP 841060
                                              EP 1997-118298
                        A2
     EP 841060
                       А3
                            20000809
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI
     US 6214319
                        В1
                              20010410
                                              US 1997-956063 19971022
PRAI DE 1996-19645909 A
                            19961107
     An aq.-alc. hair spray compn. for strengthening the hair
     contains neutralized shellac combined with .gtoreq.1 film-forming
     synthetic polymer and optionally a propellant. Addn. of shellac to the
     soln. decreases its viscosity and thus decreases the proportion of volatile org. compds. required for sprayability of the compn. Thus, a
     nonaerosol compn. with 55% volatile org. compds. contained
     octylacrylamide/tert-butylaminoethyl methacrylate/acrylic acid copolymer
     6.0, shellac 2.0, 2-aminobutanol 1.3, perfume 0.2, EtOH 55.0, and H2O 35.5
     95144-24-4
     RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
        (hair treatment agent contg. shellac and synthetic polymer
        for strengthening hair)
     95144-24-4 HCAPLUS
RN
CN
     1H-Imidazolium, 1-ethenyl-3-methyl-, chloride, polymer with
     1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)
     CRN 13474-25-4
CMF C6 H9 N2 . C1
```

```
CH=CH2
     ● c1-
*** FRAGMENT DIAGRAM IS INCOMPLETE ***
      CM
             2
      CRN 88-12-0
      CMF C6 H9 N O
  CH=CH2
L59 ANSWER 26 OF 41 HCAPLUS COPYRIGHT 2001 ACS
ΑN
      1998:282389 HCAPLUS
DN
      129:8383
      Low-static conditioning shampoo
TΙ
      Patel, Amrit M.; Chopra, Suman K.
TN
PΑ
      Colgate-Palmolive Co., USA
      U.S., 11 pp.
SO
      CODEN: USXXAM
DT
      Patent
A.T
      English
FAN.CNT 1
      PATENT NO.
                            KIND DATE
                                                       APPLICATION NO. DATE
PΙ
      US 5747436 A 19980505
                                                       US 1997-783159
                                                                             19970114
      The present invention provides an effective conditioning shampoo
      compn. which is free of conditioning amts. of silicone
      conditioning agents. It comprises: (A) 5-40 % of a detersive surfactant
      mixt. of an anionic detergent and an amphoteric surfactant at the wt. ratio of 10:1 to 0.8:1; (B) 0.05-6 % of a conditioning agent selected from the group consisting of carboxylates and polyquaternary compds., and (C) 0.1-1 % of a static control mixt. of monoalkyl quaternary
      salts and dialkyl quaternary salts. These compns. exhibit
      enhanced antistatic properties as compared to the same compns. contg. either the monoalkyl quaternary salt or the dialkyl quaternary salt as the sole antistatic ingredient. A low-static
      conditioning shampoo contained Polyquaternium-10 0.6,
      Na lauryl diethenoxy ether sulfate 10.5, cocoamidopropyl di-Me betaine
      7.8, Na cumene sulfonate 1.95, Na2HPO4 0.45, laureth-3-carboxylic acid 0.15, isostearymidopropyl dimethylamine 0.21, dimethicone copolyol (1500
      cst) 0.1, dimethicone copolyol (400 cst) 0.1, PEG-55 propylene glycol
      oleate 0.6, PEG(4) di-stearylethonium ethosulfate 0.2
      cetyltrimethylammonium chloride 0.20, and water to 100.0 %.
      26590-05-6, Polyquaternium 7
```

RL: BUU (Biological use, unclassified); BIOL (Biological study); USES

2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, polymer with

(conditioning shampoos contg. quaternary ammonium

salts as static control agents)

(Uses)

26590-05-6 HCAPLUS

RN

```
CM
          1
     CRN 7398-69-8
     CMF C8 H16 N . Cl
              Me
H_2C = CH - CH_2 - \frac{1}{N} + \frac{1}{N}
                 - CH2- CH== CH2
            ● c1-
     CM
     CRN 79-06-1
     CMF C3 H5 N O
H_2N-C-CH=CH_2
L59 ANSWER 27 OF 41 HCAPLUS COPYRIGHT 2001 ACS
     1998:282388 HCAPLUS
AN
DN
     128:323186
ΤI
     Mild foaming and conditioning detergents
     Patel, Amrit M.
PΑ
     Colgate-Palmolive Co., USA
    U.S., 12 pp.
CODEN: USXXAM
SO
DΤ
     Patent
     English
FAN.CNT 1
     PATENT NO.
                      KIND DATE
                                            APPLICATION NO. DATE
                            -----
     -----
    US 5747435 A
                            19980505 US 1996-682494 19960717
PΙ
     Compn. useful as 2-in-1 cleansing products are disclosed that are
     extremely mild to skin and hair, which use neutralized, essentially chargeless, ionic complexes of fatty amines and fatty acids to
     deliver various levels of conditioning; neutralized, essentially
     chargeless, ionic complexes of a detersive surfactant comprising a water
     sol. cationic surfactant and/or polymer complexed with one or more anionic
     surfactants; or an amphoteric surfactant complexed with one or more
     anionic surfactants; or a water sol. cationic surfactant and/or polymer
     complexed with one or more amphoteric surfactants; or a water sol.
     cationic surfactant and/or polymer complexed with one or more anionic
     surfactants and an amphoteric surfactant; detersive surfactant-sol. but
     water-insol. silicones or derivs. thereof; and water. These
     products exhibit true 2-in- conditioning properties, and are lower in cost
     than current 2 in 1 products. Clear or opacified products can be
     formulated.
TТ
     26590-05-6
     RL: TEM (Technical or engineered material use); USES (Uses)
        (mild foaming and conditioning detergents)
RN
     26590-05-6 HCAPLUS
CN
     2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, polymer with
     2-propenamide (9CI) (CA INDEX NAME)
```

2-propenamide (9CI) (CA INDEX NAME)

CM

```
CRN 7398-69-8
     CMF C8 H16 N . C1
             Me
H_2C = CH - CH_2 - N + CH_2 - CH = CH_2
             Me
            • cl-
    CM
         2
     CRN 79-06-1
    CMF C3 H5 N O
    0
H2N-C-CH-CH2
L59 ANSWER 28 OF 41 HCAPLUS COPYRIGHT 2001 ACS
AN
    1997:499090 HCAPLUS
DN
    127:180918
    Low static conditioning shampoo containing surfactants and
     conditioning agent and quaternary ammonium salt
ΙN
    Patel, Amrit M.; Chopra, Suman K.
PΑ
    Colgate-Palmolive Co., USA
SO
    PCT Int. Appl., 32 pp.
     CODEN: PIXXD2
DT
    Patent
    English
LA
FAN.CNT 1
    PATENT NO.
                     KIND DATE
                                         APPLICATION NO. DATE
                          19970724
    WO 9725975
                     A1
                                         WO 1997-US585
                                                         19970113
        W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE,
        IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML,
            MR, NE, SN, TD, TG
                    A1 19970811
B2 20000810
A1 19981104
    AU 9716995
                                         AU 1997-16995
                                                         19970113
    AU 722621
    EP 874620
                                         EP 1997-902937
                                                        19970113
        R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE, PT, IE, FI, RO
                     A 19990317
    CN 1211179
                                         CN 1997-192261 19970113
    BR 9706997
                          19990720
                                         BR 1997-6997
PRAI US 1996-9398
                     Ρ
                          19960116
    WO 1997-US585
                          19970113
                     W
    MARPAT 127:180918
OS
AB
    An effective conditioning shampoo compn. which is free of
    conditioning amts. of silicone conditioning agents is disclosed.
     It comprises (A) about 5 % to about 40 % of a detersive surfactant mixt.
```

of an anionic detergent and an amphoteric surfactant, the wt. ratio of the anionic detergent to the amphoteric surfactant being in the range of about 10:1 to 0.8:1; (B) about 0.05 % to about 6 % of a conditioning agent selected from the group consisting of 0.05 % to 5 % of a complex of essentially equimolar amts. of a C8-11 (EtO)1-10 carboxylic acid, and a

C8-11 alkyl (EtO)1-10 di-Me amine; 0.05 % to 1.0 % of a

 ${\bf polyquaternary}$  compd. selected from the group consisting of a  ${\bf quaternized}$  cellulosic polymer and a mixt. of the quaternized cellulosic polymer with a non-cellulosic quaternary conditioning polymer; and mixts. of the foregoing; (C) 0.1 % to 1 % of a static control mixt. of a quaternary ammonium salt having the formula R9R10R11R12N+X- (R9 = C14-18 alkyl; R10, R11 = C1-4 alkyl; R12 = C1-4 alkyl or benzyl and X- is a salt forming cation selected from the group consisting of chloride, bromide, methosulfate and ethosulfate); and a diquaternary ammonium salt having the formula (R13)2R14R15N+X- (R13 = C14-18 alkyl or alkylene; R14, R15 = C1-4 alkyl, (CH2CH2O)nH with at least one of R14 and R15 being a (CH2CH2O)nH group; and n is an integer from 2 to 20). These compns. exhibit enhanced antistatic properties as compared to the same compns. contg. either the monoalkyl quaternary salt or the dialkyl quaternary salt as the sole antistatic ingredient. A shampoo contained polyquaternium-10 0.5, sodium lauryl diethenoxy ether sulfate 9.25, cocamidopropyl dimethylbetaine 5.1, sodium cumene sulfonate 1.3, disodium hydrogen phosphate 0.1, dimethicone copolyol (1500 cst) 0.1, dimethicone copolyol (400 cst) 0.1, laureth-3-carboxylic acid 0.1, isostearymidopropyl dimethylamine 0.14, PEG-55 propylene glycol oleate 0.4, PEG(4) distearylethonium ethosulfate 0.2, cetrimonium chloride 0.25, and water, perfume and preservatives q.s. 100.0%. 26590-05-6, Polyquaternium 7 RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses) (low static conditioning shampoo contg. surfactants and conditioning agent and quaternary ammonium salt) RN 26590-05-6 HCAPLUS 2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, polymer with 2-propenamide (9CI) (CA INDEX NAME) CM 1 CRN 7398-69-8 CMF C8 H16 N . C1

$$\begin{array}{c} \text{Me} \\ \text{H}_2\text{C} = \text{CH} - \text{CH}_2 - \text{N} + \text{CH}_2 - \text{CH} = \text{CH}_2 \\ \text{Me} \end{array}$$

● c1-

CM 2

CRN 79-06-1 CMF C3 H5 N O

- L59 ANSWER 29 OF 41 HCAPLUS COPYRIGHT 2001 ACS
- AN 1997:259533 HCAPLUS
- DN 126:242588
- TI Two-component hair bleaching compositions
- IN Nakama, Yasunari; Takeshita, Yoko; Arai, Yasuhiro; Yamaguchi, Michihiro; Yasuda, Masaaki
- PA Shiseido Co Ltd, Japan
- SO Jpn. Kokai Tokkyo Koho, 15 pp. CODEN: JKXXAF

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DT
     Patent
LA
     Japanese
FAN.CNT 1
     PATENT NO.
                       KIND DATE
                                             APPLICATION NO. DATE
                            -----
                                             -----
                                        JP 1995-210168 19950727
                   A2 19970210
ΡI
     JP 09040536
     Two-component hair bleaching compns. comprise: (A) dyes,
AB
     amphoteric or semipolar surfactants [selected from imidazolium betaine-,
     amidobetaine-, amidosulfobeataine-, betaine-, and sulfobetaine-type
     surfactants and tertiary amine oxide-type semipolar
     surfactants], higher fatty acids and anionic surfactants [selected from polyoxyalkylene alkyl ether sulfate, alkyl ether sulfate,
     alkyloylalkyltaurine salts and .alpha.-olefin sulfones] and (B) oxidizing
     agents and cationic surfactants [selected from quaternary
     ammonium-contg. cellulose derivs., diallyldimethylammonium salt-acrylamide
     copolymer and poly(diallyldimethylammonium salts)]. A and B are mixed prior to application. The compns. showed storage-stability.
ΙT
     26590-05-6
     RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
     (Uses)
        (two-component hair bleaching compns.)
RN
     26590-05-6 HCAPLUS
CN
     2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, polymer with
     2-propenamide (9CI) (CA INDEX NAME)
     CM
     CRN 7398-69-8
     CMF C8 H16 N . Cl
              Ме
H_2C = CH - CH_2 - N + CH_2 - CH = CH_2
              Me
            • c1-
     CM
     CRN 79-06-1
     CMF C3 H5 N O
    C- CH= CH2
L59 ANSWER 30 OF 41 HCAPLUS COPYRIGHT 2001 ACS
ΑN
     1997:259531 HCAPLUS
DN
     126:242586
ΤI
     Two-component hair dye compositions
     Nakama, Yasunari; Takeshita, Yoko; Arai, Yasuhiro; Yamaguchi, Michihiro;
IN
     Yasuda, Masaaki
PA
     Shiseido Co Ltd, Japan
so
     Jpn. Kokai Tokkyo Koho, 15 pp.
     CODEN: JKXXAF
DΤ
     Patent
LA
     Japanese
FAN.CNT 1
     PATENT NO.
                       KIND DATE
                                             APPLICATION NO. DATE
   JP 09040534
                       A2
                             19970210
                                             JP 1995-210167 19950727
```

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Two-component hair dye compns. comprise: (A) dyes, amphoteric or
      semipolar surfactants [selected from imidazolium betaine-, amidobetaine-,
      amidosulfobeataine-, betaine-, and sulfobetaine-type surfactants and
      tertiary amine oxide-type semipolar surfactants], higher fatty
     acids and anionic surfactants [selected from polyoxyalkylene alkyl ether sulfate, alkyl ether sulfate, alkyloylalkyltaurine salts and alpha.-olefin sulfones] and (B) oxidizing agents and cationic surfactants
      [selected from quaternary ammonium-contg. cellulose derivs.,
      diallyldimethylammonium salt-acrylamide copolymer and
      poly(diallyldimethylammonium salts)]. A and B are mixed prior to
      application. The compns. showed storage-stability.
      26590-05-6
IT
      RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
      (Uses)
         (two-component hair dye compns.)
      26590-05-6 HCAPLUS
2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, polymer with
RN
CN
      2-propenamide (9CI) (CA INDEX NAME)
     CM
      CRN 7398-69-8
     CMF C8 H16 N . Cl
                Me
H_2C = CH - CH_2 - N + CH_2 - CH = CH_2
                Me
              • c1-
     CM
           2
     CRN 79-06-1
     CMF C3 H5 N O
H_2N-C-CH=CH_2
     ANSWER 31 OF 41 HCAPLUS COPYRIGHT 2001 ACS
     1995:990836 HCAPLUS
AN
DN
     124:15280
ΤI
     Combined skin moisturizing and cleansing bar composition
IN
     Kacher, Mark Leslie; Geary, Nicholas William; Evans, Marcus Wayne; Hedges,
     Steven Kirk; Ehrhard, Joseph Albert, Jr.; Schwartz, James Robert;
     Weisgerber, David John
Procter and Gamble Co., USA
PΑ
SO
     PCT Int. Appl., 58 pp.
      CODEN: PIXXD2
DT
     Patent
LA
     English
FAN.CNT 1
     PATENT NO.
                         KIND DATE
                                                 APPLICATION NO.
                                                                    DATE
                          A1
                                19951012
                                                 WO 1995-US2588
                                                                    19950301
          W: AM, AU, BB, BG, BR, BY, CA, CN, CZ, FI, HU, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LV, MD, MG, MN, MX, NO, NZ, PL, RO, RU, SG, SI,
               SK, TJ, TT, UA, UZ, VN
          RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT,
               LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE,
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SN, TD, TG
                     AA
     CA 2185667
                            19951012
                                              CA 1995-2185667 19950301
     AU 9519758
                        A1
                             19951023
                                              AU 1995-19758
                                                               19950301
                                                               19950301
     EP 752846
                        Α1
                             19970115
                                              EP 1995-912678
     EP 752846
                        В1
                             20010801
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, NL, PT, SE
                       Α
                             19970312
                                             CN 1995-192394 19950301
     CN 1145026
     ни 75203
                        A2
                            19970428
                                              HU 1996-2660
                                                               19950301
     HU 219188
                        В
                             20010228
     BR 9507236
                             19970916
                                              BR 1995-7236
                                                                19950301
                        Α
                            19971111
                                              JP 1995-525688
     JP 09511248
                        Т2
                                                               19950301
                                             AT 1995-912678
     AT 203663
                        E
                             20010815
                                                               19950301
     FI 9603876
                        Α
                             19960927
                                              FI 1996-3876
                                                                19960927
     NO 9604077
                             19961202
                        Α
                                             NO 1996-4077
                                                                19960927
PRAI US 1994-220354
                             19940330
                        Α
                             19950301
     WO 1995-US2588
                        W
OS
     MARPAT 124:15280
     The present invention relates to a personal skin moisturizing and
     cleansing bar compn. which comprises both a skin cleansing agent and a
     lipid moisturizing agent in the same bar which actually deposits an
     effective amt. of the lipid on the skin of the user in the bath or shower.
     The bar compn. of this invention comprises: (1) 5-40 parts of a lipid skin
     moisturizing agent, (2) 10-50 parts of a rigid cryst. skeleton network
     structure consisting essentially of selected fatty acid soaps and selected fatty acids, (3) 1-50 parts of a lathering synthetic surfactant, and (4)
     10-50 parts water. The bar provides good cleansing, lather and good
     sensory feel and yet surprisingly provides a lipid moisturizing benefit
     via deposition of the lipid on the skin of the user. The bar compn. is
     solid and on a macro scale is homogeneous. A soap bar contained Na myristic soap 14.88, myristic acid 0.09, Na lauric soap 1.74, lauric acid
     0.01, coconut soap 0.78, perfume 0.5, NaCl 2.5, petrolatum 12.8, glycerol
     5.00, dimethicone 1.5, Na cocoyl isethionate 24.44, cocoamidopropyl
     hydroxysultaine 2.0, mineral oils 3.2, water 27.61, and misc. 1.21%.
     26590-05-6, Merquat 550
     RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
        (combined skin moisturizing and cleansing bar compn.)
     26590-05-6 HCAPLUS
     2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, polymer with
     2-propenamide (9CI) (CA INDEX NAME)
     CM
         1
     CRN 7398-69-8
     CMF C8 H16 N . C1
              Me
H_2C = CH - CH_2 - N + CH_2 - CH = CH_2
```

● Cl~

CM 2

CRN 79-06-1 CMF C3 H5 N O

O || H<sub>2</sub>N-C-CH==CH<sub>2</sub>

```
L59 ANSWER 32 OF 41 HCAPLUS COPYRIGHT 2001 ACS
     1994:707986 HCAPLUS
AN
DN
     121:307986
ΤI
     Shampoo-conditioning composition and method of making
ΙN
     Thiel, Dawn M.; Wilmott, James M.; Kaysen, John R.
     DowBrands L.P., USA
PA
SO
     U.S., 9 pp. Cont. of U.S. Ser. No. 847,852, abandoned.
     CODEN: USXXAM
\mathtt{DT}
     Patent
     English
LA
FAN.CNT 1
     PATENT NO.
                       KIND DATE
                                             APPLICATION NO. DATE
     _____ ____
     US 5344643
                             19940906
                                             US 1993-112638 19930827
PRAI US 1990-633581
                             19901221
     US 1992-847852
                            19920309
     Disclosed is an anionic {\tt shampoo-}{\tt conditioning} compn. comprising
     an oily conditioning agent, a shampooing agent, a carboxyvinyl polymer, a
     cationic conditioning agent, and water. The carboxyvinyl polymer has a
     large proportion of carboxyl monomeric groups and a small proportion of
     long-chain alkyl monomeric units, and is crosslinked to a small
     degree. Further disclosed is a process for making the above compn. and a method for applying it to hair. The compn. provides enhanced
     conditioning properties utilizing both oily and cationic conditioning
     agents in combination with an anionic carboxyvinyl polymer while
     maintaining stability and dispersion.
TT
     26590-05-6, Merquat 550
     RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
     (Uses)
        (shampoo conditioning compn.)
RN
     26590-05-6 HCAPLUS
CN
     2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, polymer with
     2-propenamide (9CI) (CA INDEX NAME)
     CM
     CRN 7398-69-8
CMF C8 H16 N . C1
              Мe
H_2C = CH - CH_2 - \dot{N} + CH_2 - CH = CH_2
              Me
            ● c1~
     CM
     CRN 79-06-1
     CMF C3 H5 N O
H2N-C-CH=CH2
L59 ANSWER 33 OF 41 HCAPLUS COPYRIGHT 2001 ACS
     1994:307082 HCAPLUS
NΑ
DN
     120:307082
ΤI
     Hair relaxer and post-relaxer brightener system containing
     hydrogen peroxide
```

```
Darkwa, Adu G.; Villanueva, Apolonio, III
     Johnson Products Co., Inc., USA
PA
     U.S., 17 pp.
CODEN: USXXAM
SO
DT
     Patent
LA
     English
FAN.CNT 1
     PATENT NO.
                        KIND DATE
                                              APPLICATION NO. DATE
     US 5293885 A 19940315 US 1991-728572 19910711
                              -----
ΡI
     A {\bf hair} relaxer and post-relaxer brightener system and method
     which overcomes the undesirable alteration of the natural tone of
     hair, esp. of naturally gray hair, by highly-alk.
     hair-relaxing systems is disclosed . A hair brightener compn. contained H2O2 5, Polyquaternium-10 0.3, hydroxyethyl
     cellulose 0.4, pearlescing agent (Incropearl) 1, phosphoric acid q.s., perfume q.s., D&C Red # 33 q.s., and water q.s. to 100%.
ΙT
     53694-17-0, Polyquaternium 22
     RL: BIOL (Biological study)
        (hair brightener compn. contg. hydrogen peroxide and)
     53694-17-0 HCAPLUS 2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, polymer with
RN
CN
     2-propenoic acid (9CI) (CA INDEX NAME)
     CM
     CRN 7398-69-8
     CMF C8 H16 N . Cl
              Me
H_2C = CH - CH_2 - N + CH_2 - CH = CH_2
              Me
             ● c1-
     CM
         2
     CRN 79-10-7
     CMF C3 H4 O2
но-с-сн сн2
L59 ANSWER 34 OF 41 HCAPLUS COPYRIGHT 2001 ACS
     1993:131746 HCAPLUS
AN
DN
     118:131746
     Shampoos containing cationic and anionic surfactants to impart
     improved hair conditioning properties
IN
     Duffy, Michele; Bergmann, Wolfgang
PA
     Curtis, Helene, Inc., USA
so
     Eur. Pat. Appl., 42 pp.
     CODEN: EPXXDW
DT
     Patent
     English
LA
FAN.CNT 1
     PATENT NO.
                        KIND DATE
                                               APPLICATION NO. DATE
                              19921104
     EP 511652
                         Α1
                                               EP 1992-107311 19920429
     EP 511652
                              19951129
                         В1
```

```
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE
2066885 AA 19921030 CA 1992-2066885 19920423
     CA 2066885
                                           CA 1992-2066885 19920423
                           19961205
     IL 101682
                        A1
                                            IL 1992-101682 19920423
     NO 9201640
                       Α
                             19921030
                                            NO 1992-1640
                                                              19920428
     AU 9215224
                           19921105
                                            AU 1992-15224
                       A1
                                                              19920428
                       B2 19940922
     AU 653216
                            19930127
     ZA 9203084
                       Α
                                            ZA 1992-3084
                                                              19920428
     AT 130751
                        E
                            19951215
                                            AT 1992-107311
                                                             19920429
     ES 2080369
                       Т3
                             19960201
                                            ES 1992-107311
                                                              19920429
                                            JP 1992-155568
     JP 06107525
                            19940419
                       A2
                                                              19920430
PRAI US 1991-692709
                            19910429
OS
     MARPAT 118:131746
     A conditioning shampoo comprises (1) an anionic cleansing
     surfactant 1-15, (2) a polymeric cationic conditioning compd. 0.1-2, (3) a
     cationic conditioning surfactant 0.2-10, (4) a fatty acid ester 0.1-3, and
     (5) water as carrier. A hair conditioner contained
     guar hydroxypropyltrimonium 1.50, ricinoleamidopropyl trimonium chloride
     (Surfactrol Q1) 1.65, linoleamidopropyl PG-dimonium chloride phosphate
     (Phospholipid EFA) 0.60, ammonium lauryl sulfate 6.14, ammonium lauryl
     ether sulfate 6.14, cetearyl octanoate (Purcellin oil) 2.00, and water
     q.s. 100%.
TΨ
     26590-05-6, Polyquaternium 7
     RL: BIOL (Biological study)
        (hair conditioning shampoo contg. anionic
        surfactants and fatty acid esters and)
RN
     26590-05-6 HCAPLUS
CN
     2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, polymer with
     2-propenamide (9CI) (CA INDEX NAME)
     CM
     CRN 7398-69-8
     CMF C8 H16 N . C1
              Ме
H_2C = CH - CH_2 - N^{+} - CH_2 - CH = CH_2
              Me
            ● c1-
     CM
     CRN 79-06-1
     CMF C3 H5 N O
    Ω
H_2N-C-CH=CH_2
L59 ANSWER 35 OF 41 HCAPLUS COPYRIGHT 2001 ACS
     1992:241711 HCAPLUS
ΑN
DN
     116:241711
     Washing compositions based on silicone and fatty alcohols
     containing ethers and/or thioethers or sulfoxide
ΤN
     Sebag, Henri; Dubief, Claude; Beauquey, Bernard
PΑ
     Oreal S. A., Fr.
so
     Eur. Pat. Appl., 33 pp.
     CODEN: EPXXDW
DT
     Patent
LA
     French
```

```
FAN.CNT 1
     PATENT NO.
                        KIND DATE
                                               APPLICATION NO. DATE
                               -----
     EP 457688
                        A1 19911121
                                               EP 1991-401276 19910517
     EP 457688
                        В1
                             19931027
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, NL, SE
     FR 2662175 A1 19911122
                                               FR 1990-6279 19900518
                             19911119
1991
     CA 2042848
                                               CA 1991-2042848 19910517
                         AA
     AU 9177108
                         A1
                                               AU 1991-77108
                                                                  19910517
                        B2 19940811
A2 19920817
     AU 651972
     JP 04226908
                                                JP 1991-113448
                                                                  19910517
     AT 96302
                                               AT 1991-401276
                         E
                               19931115
                                                                  19910517
                                               ES 1991-401276
                             19941116
     ES 2060320
                         Т3
                                                                  19910517
                               19940104
     US 5275755
                        Α
                                               US 1991-702094
                                                                  19910520
PRAI FR 1990-6279
                               19900518
     EP 1991-401276
                               19910517
     MARPAT 116:241711
     Compns. for washing keratinic material, particularly {\bf hair} and
     skin, comprise .gtoreq.1 silicone, .gtoreq.1 detergent
     surfactant, and .gtoreq.1 C27-44 alc. contg. 1 or 2 ether and/or thioether
     or sulfoxide groups R1X[C2H3(OH)]CH2YR2 (I; R1, R2 = linear C12-20 alkyl; X = O, S, sulfoxide; Y = O, S, sulfoxide, CH2; with provisions). A
     shampoo contained 28% Na ethoxylated Cl2-14 alkylether sulfate with 2.2 mol ethylene oxide 14, 32% laurylbetaine (Dehyton AB
     30) 2.6 , Na cocoylisethionate (Arlatone SCI Prilled) 6, ethoxylated
     linear C12-14 alc. with 3 mol ethylene oxide 10, Rhone Poulenc oil 47 V 500000 3, I [R1 = C12H25; X = O; Y = CH2; R2 = C12 H25/C14 H29
     (50/50 \text{ in mol})] 3, preservative, perfume, pH spontaneously 5.7, and water
     to 100g.
     53694-17-0, Merquat 280
     RL: BIOL (Biological study)
         (douche gel contg.)
     53694-17-0 HCAPLUS
RN
CN
     2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, polymer with
     2-propenoic acid (9CI) (CA INDEX NAME)
     CM
         1
     CRN 7398-69-8
     CMF C8 H16 N . C1
               Me
H_2C = CH - CH_2 - N + CH_2 - CH = CH_2
               Me
             ● c1-
     CM 2
     CRN 79-10-7
     CMF C3 H4 O2
    0
HO-C-CH=CH2
L59 ANSWER 36 OF 41 HCAPLUS COPYRIGHT 2001 ACS
     1991:614514 HCAPLUS
ΑN
DN
     115:214514
```

Stable conditioning shampoo containing compatible anionic

```
surfactant, cationic conditioning agent, and non-volatile silicone
     emulsion
TN
     Duvel, Lane A.
PΑ
     Curtis, Helene, Inc., USA
     U.S., 15 pp.
     CODEN: USXXAM
DT
     Patent
LA
    English
FAN.CNT 2
    PATENT NO.
                     KIND DATE
                                         APPLICATION NO. DATE
                     ----
                          19910723
PΤ
    US 5034218
                     Α
                                         US 1990-552437
                                                          19900713
     US 5114706
                     A 19920519
                                         US 1991-667575
                                                         19910311
     ZA 9105124
                           19920527
                                         ZA 1991-5124
                     Α
                                                          19910702
                     A1 19960912
                                         IL 1991-98789
     IL 98789
                                                          19910711
                     A 19920114
    NO 9102741
                                         NO 1991-2741
                                                          19910712
    NO 180565
                          19970203
                      В
     NO 180565
                     C 19970514
     FI 9103385
                          19920114
                                         FI 1991-3385
                      Α
                                                          19910712
                     В
    FI 98701
                          19970430
     FI 98701
                           19970811
                     C
                     AA 19920114
    CA 2046994
                                         CA 1991-2046994 19910712
                         19920115
     EP 466184
                     A2
                                         EP 1991-111668
                                                         19910712
                     A3
B1
     EP 466184
                          19930113
                         19951025
    EP 466184
        R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE
                A1 19920116
    AU 9180404
                                         AU 1991-80404
                                                          19910712
     AU 639810
                     B2
                          19930805
     JP 04230310
                           19920819
                      A2
                                          JP 1991-266800
                                                          19910712
                                         AT 1991-111668
    AT 129403
                          19951115
                     Ε
                                                          19910712
PRAI US 1990-552437
                          19900713
    A hair conditioning shampoo comprises an anionic
     cleaning surfactant 5-65, a cationic C12-22 alkyl quaternary
     N-contg. conditioning agent 0.1-20, a C8-32 fatty alc. 0.5-10, and
    non-volatile silicone 0.5-10, an anionic crosslinked
     polymeric suspending agent 0.1-5% and water q.s. The shampoo
     provides the hair with improved phys. and cosmetic
     conditioning properties such as gloss, thickness, softness, and excellent
    wet and dry combing properties. Formulations of shampoo
    conditioners are given.
ፐጥ
    53694-17-0, Merquat 280
    RL: BIOL (Biological study)
        (hair conditioning shampoo contg.)
     53694-17-0 HCAPLUS
    2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, polymer with
    2-propenoic acid (9CI) (CA INDEX NAME)
    CM
    CRN 7398-69-8
    CMF C8 H16 N . Cl
             Me
H_2C = CH - CH_2 - N + CH_2 - CH = CH_2
             Мe
           ● c1~
    CM
    CRN 79-10-7
    CMF C3 H4 O2
```

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HO-C-CH=CH2
L59 ANSWER 37 OF 41 HCAPLUS COPYRIGHT 2001 ACS
AN
     1989:483867 HCAPLUS
     111:83867
     \textbf{Hair} \ \texttt{conditioning} \ \textbf{shampoo} \ \texttt{containing} \ \texttt{amine}
TΤ
      oxides and anionic, cationic and amphoteric surfactants
ΤN
     Scandel, Jean
     Richardson-Vicks, Inc., USA
     U.S., 4 pp.
CODEN: USXXAM
so
ידת
     Patent
LA
     English
FAN.CNT 1
     PATENT NO.
                       KIND DATE
                                              APPLICATION NO. DATE
     US 4832872 A 19890523
                                            US 1988-147239 19880122
РΤ
     A cosmetic for washing and conditioning hair comprises
     an aq. soln. (pH 5.5-6.5) contg. an anionic surfactant 9-12, an agent with
     a conditioning effect which is an amine oxide contg. a linear or
     branched alkyl group or alkylene group with at least 14 \, C \, 1-3, a cationic
      quaternary polymer with a conditioning action 0.2-1.5, and an
      amphoteric surfactant which is cocoamidopropylbetaine in combination with
     a hydrophilic phosphoamino lipid in a 9:1 wt. ratio 0.7-2% by wt.; the
     remainder of the compn. consists of known additives. A cosmetic
     contained Na lauryl sulfate 9.1, K cocoylpeptidate 1.0,
     cocoamidopropylbetaine 0.9, modified lecithin 0.1, dimethylstearylamine
     oxide 1.3, dimethylmyristyl/cetylamine oxide 0.4,
     Polyquaternium-7 0.5, Polyquaternium-10 0.2,
     urea 3.0, nitrilotriacetic acid 1.0, coco diethanolamide 1.0, coco
     monoethanolamide 0.8, MEA undecylenamide 0.1, ethylene glycol stearate
      1.2, aminomethylpropanol 0.6, panthenol Et ether 0.3, Kathon G 0.1, Bu
     glycol 1.0, EtOH 1.0, dye, perfume, H2O to 100% by wt. The cationic quaternary polymer used in the shampoo enables the conditioning properties of the shampoo to be enhanced while
     being compatible with the washing base. At slightly acidic pH the
      shampoo provides an excellent conditioning action without an
     excessive substantive effect.
     26590-05-6, Polyquaternium-7
     RL: BIOL (Biological study)
         (conditioning shampoos contg. amine oxides and
         amphoteric and anionic surfactants and)
RN
     26590-05-6 HCAPLUS
     2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, polymer with 2-propenamide (9CI) (CA INDEX NAME)
     CM 1
     CRN 7398-69-8
     CMF C8 H16 N . Cl
H<sub>2</sub>C == CH - CH<sub>2</sub> - N + CH<sub>2</sub> - CH == CH<sub>2</sub>
```

@ c1-

CM 2

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CRN 79-06-1
              CMF C3 H5 N O
H2N-C-CH==CH2
L59 ANSWER 38 OF 41 HCAPLUS COPYRIGHT 2001 ACS
AN
              1989:121014 HCAPLUS
DN
              110:121014
             Amino oxide-containing composition for washing and conditioning
             hair in a single step
ΤN
             Scandel, Jean
PA
             Laboratoire Lachartre S. A., Fr.
so
              Eur. Pat. Appl., 7 pp.
             CODEN: EPXXDW
DT
             Patent
LA
             French
FAN.CNT 1
             PATENT NO.
                                                           KIND DATE
                                                                                                                    APPLICATION NO. DATE
             EP 277876
                                                         A2 19880810
A3 19880914
ΡI
                                                                                                                   EP 1988-400205 19880129
             EP 277876
                      R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE
              FR 2610194 A1 19880805
FR 2610194 B1 19921224
                                                                                                                   FR 1987-1060
                                                                                                                                                                 19870129
PRAI FR 1987-1060
                                                                          19870129
             MARPAT 110:121014
OS
            The title compn. is an aq. soln. (pH 5.5-6.5) comprising anionic surfactant(s) 9-12, amine oxide(s) 1-3, quaternary cationic polymer(s) 0.2-1.5, and amphoteric surfactant 0.7-2%. The amine oxide is R1R2R3NO (R1,R2 = C1-4 alkyl or hydroxyalkyl; R3 = C14-20 alkyl, RCONHR4; R = C13-19 alkyl; R4 = C1-4 alkylene). The amphoteric surfactant is a Negligible between the contractions of the state of the contraction of the contractio
              surfactant is a N-alkyl-.beta.-aminopropionate, an allylbetaine, or an
             imidazoline deriv. A compn. comprised Na lauryl sulfate 9.1, K cocopolypeptidate 1.0, cocoamidopropylbetaine 0.9, modified lecithin 0.1,
             dimethylstearylamine oxide 1.3, dimethylmyristyl cetylamine oxide 0.4, polyquaternium-7 0.5, polyquaternium-10 0.2, urea 3.0, nitriloacetic acid 1.0, coco diethanolamide
              1.0, coco monoethanolamide 0.8, undecyleneamide MEA 0.1, ethylene glycol
             stearate 1.2, aminomethylpropanol 0.6, panthenol Et ether 0.3, kathon CG 0.1, Bu glycol 1.0%, dye, perfume, and water to 100%.
             26590-05-6, Polyquaternium-7
             RL: BIOL (Biological study)
                      (hair conditioner contg.)
             26590-05-6 HCAPLUS
RN
CN
             \hbox{2-Propen-1-aminium, $N,N-$dimethyl-$N-2-$propenyl-, chloride, polymer with}\\
             2-propenamide (9CI) (CA INDEX NAME)
             CM
             CRN 7398-69-8
CMF C8 H16 N . C1
                                     Me
H_2C = CH - CH_2 - N^+ - CH_2 - CH = CH_2
```

Ме

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CM
           2
      CRN 79-06-1
     CMF C3 H5 N O
H2N-C-CH=CH2
L59 ANSWER 39 OF 41 HCAPLUS COPYRIGHT 2001 ACS
     1988:576095 HCAPLUS
AN
DN
     109:176095
ΤI
      Hair conditioners containing poly(alkyloxazoline) and
      cationic polymers
     Grollier, Jean Francois; Dubief, Claude Oreal S. A., Fr.
ΙN
PΑ
     Ger. Offen., 16 pp.
SO
     CODEN: GWXXBX
     Patent
DT
     German
LA
FAN.CNT 1
     PATENT NO.
                        KIND DATE
                                                APPLICATION NO. DATE
                               -----
     DE 3731477
                         A1 19880324
                                                DE 1987-3731477 19870918
                         C2 19990121
A1 19880325
     DE 3731477
     FR 2604087
                                                FR 1987-12876
                                                                   19870917
     FR 2604087
                         B1 19910503
                         A 19880418
A 19890919
     NL 8702224
                                                NL 1987-2224
                                                                   19870917
     US 4867966
                                                US 1987-97703
                                                                   19870917
     CH 673772
                               19900412
                                                CH 1987-3590
                         Α
                                                                   19870917
                             19880413
     GB 2195534
                         A1
                                                GB 1987-21973
                                                                   19870918
                              19901024
     GB 2195534
                         B2
     JP 63088116
                         A2
                               19880419
                                                JP 1987-234697
                                                                   19870918
     BE 1000437
                                                BE 1987-1051
                         А3
                              19881206
                                                                   19870918
     CA 1295256
                               19920204
                                                CA 1987-547280
                         A1
                                                                   19870918
PRAI LU 1986-86599
                               19860919
     The title cosmetic contains .gtoreq.1 poly(oxazoline) derivs.
     [N(COR)CH2CH2]n (I; R = alkyl, n = polymeric) with mol. wt. >10,000, and .gtoreq.1 cationic polymers. The cationic polymer may be selected from
     quaternized polymers or polysiloxanes, poly(amines)
     poly(minoamides), or quaternary polyammonium compds.
                                                                  This
     cosmetic compn. is useful for the conditioning treatment of
     hair following a hair waving procedure, dyeing, or shampooing; I are capable of imparting body and bounce to the hair
      , but only in combination with cationic polymers are shine, manageability,
     and softness imparted satisfactorily. A wave setting lotion contained I
     (R = Et) (polymer XAS 10874-03) 0.6, Gaffix VC 713 (cationic terpolymer) 0.5, H2O 100 g, and sufficient EtOH, 2-amino-2-methyl-1-propanol, perfume,
     color and preservative.
ΙT
     95144-24-4
     RL: BIOL (Biological study)
         (hair conditioners contg. poly(alkyloxazolione)
RN
     95144-24-4 HCAPLUS
     1H-Imidazolium, 1-ethenyl-3-methyl-, chloride, polymer with
CN
     1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)
     CM
          1
     CRN 13474-25-4
     CMF C6 H9 N2 . C1
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## ● c1-

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 2

CRN 88-12-0 CMF C6 H9 N O

L59 ANSWER 40 OF 41 HCAPLUS COPYRIGHT 2001 ACS

ΆN 1987:561395 HCAPLUS

DN 107:161395

Mild skin cleansing soap bar and method of making it ΤI

Medcalf, Ralph Ferdinand, Jr.; Visscher, Martha Orrico; Knochel, John Robert; Dahlgren, Richard Marc ΙN

PA Procter and Gamble Co., USA

so Eur. Pat. Appl., 30 pp.

CODEN: EPXXDW Patent

DT

English

LA

FAN.CNT 1										
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE					
PI	EP 227321	A2	19870701	EP 1986-309259	19861127					
	EP 227321	A3	19880803							
	EP 227321	В1	19940817							
	R: AT, BE,	CH, DE	, FR, GB, GR,	IT, LI, LU, NL, SE						
	AU 8665847	A1	19870604	AU 1986-65847	19861201					
	AU 610489	В2	19910523							
	CA 1331551	A1	19940823	CA 1986-524215	19861201					
	JP 62195097	A2	19870827	JP 1986-287581	19861202					
	US 4820447	Α	19890411	US 1987-119284	19871030					
	US 5064555	Α	19911112	US 1989-333379	19890405					
PRAI	US 1985-803742		19851202							
	US 1987-119284		19871030							

19871030 A mild soap bar comprises 50-90% soap and a uniformly distributed hydrated cationic skin conditioner chosen from polysaccharides, copolymers of saccharides with cationic monomers, polyalkyleneimines, ethoxylated polyalkyleneimines, and N,N'-bis[3-(dimethylamino)propyl] urea-O(CH2CH2Cl)2 copolymer (I). The mild soap bar is composed of the hydrated polymer 0.2-5, surface-active agents (which can be .gtoreq.50 wt.% C8-22 fatty acid, esp. coconut tallow, soaps and .ltoreq.20 wt.% synthetic surfactant) and a skin moisturizer 0-20%. A soap bar was prepd. contg. a base soap (50:50 tallow-coconut) 66.3, coconut fatty acids 5.6, water 10.0, glycerin 4.0, NaCl 1.0, Jaguar C-145 (a quaternized guar gum deriv.) 1.0, and addnl. components (perfume, color, etc.) 2.1wt.%. In clin. testing by grading scales of skin dryness, smoothness, and erythema, the mild soap bar was better than a com. std. mild soap bar.

Suitable synthetic surfactants can be chosen from alkyl glyceryl ether sulfonates, anionic acyl sarcosines, Me aryl taurates, N-acyl glutamates, alkyl glucosides, acyl isethionates, alkyl sulfosuccinates, alkyl and ethoxylated alkyl phosphates, Me glucose esters, protein condensates, ethoxylated alkyl sulfates, amine oxides, betaines, and sultaines.

**26590-05-6**, **Merquat** 550 ΙT RL: BIOL (Biological study) (mild soap bars contg.)

26590-05-6 HCAPLUS

2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, polymer with 2-propenamide (9CI) (CA INDEX NAME)

CRN 7398-69-8 CMF C8 H16 N . Cl

● c1-

CM2

CRN 79-06-1 CMF C3 H5 N O

ANSWER 41 OF 41 HCAPLUS COPYRIGHT 2001 ACS

1984:597934 HCAPLUS AN

101:197934 DN

TΙ Hair preparation containing at least one cationic polymer, one anionic polymer, a sugar and a salt

IN Grollier, Jean Francoise; Fourcadier, Chantal

PAso

Oreal S. A. , Fr. Ger. Offen., 46 pp. CODEN: GWXXBX

DTPatent

German

ENN CNT 1

FAN.CNT I										
	PATENT NO.	KIND	DATE	APPLICATION NO. DATE						
ΡI	DE 3404627	A1	19840816	DE 1984-3404627 19840209						
	DE 3404627	C2	19920514							
	SE 8400510	A	19840811	SE 1984-510 19840201						
	BE 898853	A1	19840807	BE 1984-212348 19840207						
	FR 2540725	A1	19840817	FR 1984-1952 19840208						
	FR 2540725	В1	19860919							
	GB 2134784	A1	19840822	GB 1984-3372 19840208						
	GB 2134784	B2	19860828							
	NL 8400401	Α	19840903	NL 1984-401 19840208						
	DK 8400577	A	19840811	DK 1984-577 19840209						
	JP 59172413	A2	19840929	JP 1984-22718 19840209						
	JP 04030366	B4	19920521							
	CH 659388	A	19870130	CH 1984-621 19840209						

US 4668508 19870526 US 1984-578645 A 19840209 A1 19860610 CA 1205748 CA 1984-447221 19840210 PRAI LU 1983-84638 19830210 A hair conditioner that detangles wet hair, gives a good feel, and gives dry hair a shine and vol. contains 0.01-10% of a cationic polymer (polyamine, polyaminopolyamide or quaternary ammonium type), 0.01-10% of an anionic polymer (with .gtoreq.1 carboxyl or sulfonic acid group), 0.1-10% of a mono- or oligosaccharide, and 0.1-10% of an inorg. or org. salt or their mixts. (contg. alkali, alk. earth, or di- or trivalent metals. A pH 4.6 lotion contained: crotonic acid-polyethylene glycol-vinyl acetate polymer [68134-63-4] (8:10:82) 0.6, **Gafquat** 734 [53633-54-8] 0.3, fructose [30237-26-4] 2, CaCl2 2 g in EtOH to 50% by vol. and H2O to 100 g. The lotion was applied to wet  $\operatorname{\textbf{hair}}$ , which was dried without rinsing. ΙT 95144-24-4 RL: BIOL (Biological study) (hair conditioners contg. anionic polymers and salts and sugars and) 95144-24-4 HCAPLUS RN 1H-Imidazolium, 1-ethenyl-3-methyl-, chloride, polymer with CN 1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME) CM CRN 13474-25-4 CMF C6 H9 N2 . C1 СН== СН2 ● c1-\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\* CM CRN 88-12-0 CMF C6 H9 N O

# => d bib abs hitstr L60 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2001 ACS AN 1998:38372 HCAPLUS DN 128:131909 Method for separation of anionic dyes from wastewater Detering, Juergen; Steenken-Richter, Ingrid; Stein, Stefan; Fussnegger, ΤI ΙN Bernhard PΑ BASF A.-G., Germany Ger. Offen., 8 pp. CODEN: GWXXBX DT Patent LA German FAN.CNT 1 PATENT NO. KIND DATE APPLICATION NO. DATE DE 19626657 A1 19980108 DE 1996-19626657 19960703 ΡI Anionic dyes, e.g., C.I. Reactive Red 120 or C.I. Reactive Violet, are AB removed from wastewater by adding 10--500 g/100 L wastewater of a polymer contg., based on the wt. of the monomers, 20-99.5 wt.% of .gtoreq.1 heterocycles based on vinylimidazole and 0-79.5 wt.% of another copolymerizable monomer, prepd. in the presence of 0.5-30 wt.% of a crosslinking agent. ΙT 87865-40-5 RL: NUU (Nonbiological use, unclassified); USES (Uses) (method for sepn. of anionic dyes from wastewater) 87865-40-5 HCAPLUS RN 2-Imidazolidinone, 1,3-diethenyl-, polymer with 1-ethenyl-1H-imidazole and 1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME) CN CM CRN 13811-50-2 CMF C7 H10 N2 O сн== сн2 $CH = CH_2$ CM 2

$$N$$
 $CH = CH_2$ 

- . , h

CM 3

CRN 88-12-0 CMF C6 H9 N O

CRN 1072-63-5 CMF C5 H6 N2

13811-50-2, N,N'-Divinylethyleneurea ΙT

RL: RCT (Reactant)
(method for sepn. of anionic dyes from wastewater)
13811-50-2 HCAPLUS

RN

CN 2-Imidazolidinone, 1,3-diethenyl- (9CI) (CA INDEX NAME)

$$CH = CH_2$$
 $N$ 
 $O$ 
 $CH = CH_2$ 

```
=> d bib abs hitstr 1
```

L63 ANSWER 1 OF 7 HCAPLUS COPYRIGHT 2001 ACS

AN 1999:439338 HCAPLUS

DN 131:74165

TI Preparation of polymers containing peroxycarboxyl groups

IN Tropsch, Jurgen; Breitenbach, Jorg

A BASF A.-G., Germany

SO U.S., 7 pp., Cont.-in-part of U.S. 5,804,669.

CODEN: USXXAM

DT Patent

LA English

FAN.CNT 2

T LAIM	CNI Z						
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE		
ΡI	US <u>592281</u> 4	Α	19990713	US 1998-89483	19980602		
	US 5804669	A	19980908	US 1997-813979	19970310		
PRAT	US 1997-813979		19970310				

PRAI US 1997-813979 19970310 DE 1996-19610817 19960319

AB Copolymers prepd. from .gtoreq.1 monoolefinically unsatd. dicarboxylic anhydride and at least one N-vinyllactam are suspended in an inert solvent and treated with hydrogen peroxide to provide polymers contg. 1-95% peroxycarboxy groups. The content of peroxycarboxy groups in the polymers is controlled via the amt. of H2O2 added. Thus, 25 g maleic anhydride-N-vinylpyrrolidone copolymer is suspended in 125 mL Et acetate and treated with 9.6 g H2O2 to give a polymer contg. peroxycarboxyl groups and having a bound content of H2O2 of 11.1%. The polymeric peracid product is used as an initiator in the polymn. of acrylic monomers, e.g., acrylic acid and hydroxypropyl acrylate-N,N-dimethyl-N-ethyl-N-(2-methacryloyloxy)ethylammonium ethylsulfate.

IT 13811-50-2DP, polymers with unsatd. dicarboxylic anhydride and

N-vinyllactam

RL: IMF (Industrial manufacture); PREP (Preparation)

(crosslinked, peroxycarboxy group-contg.; prepn. of polymers
contg. peroxycarboxy groups and their use as initiators in polymn. of
acrylic monomers)

RN 13811-50-2 HCAPLUS

CN 2-Imidazolidinone, 1,3-diethenyl- (9CI) (CA INDEX NAME)

$$CH = CH_2$$
 $N = O$ 
 $CH = CH_2$ 

## RE.CNT 13

RE

- (1) Anderson; US 3975332 1976 HCAPLUS
- (5) Anon; WO 93/07185 1993 HCAPLUS
- (7) Bowman; US 3634503 1972 HCAPLUS
- (8) Crawford; US 3850891 1974 HCAPLUS
- (9) Kropp; US 3496150 1970 HCAPLUS
- ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
=> d bib abs hitstr 2
L63 ANSWER 2 OF 7 HCAPLUS COPYRIGHT 2001 ACS
     1997:579758 HCAPLUS
ΑN
     127:234753
DN
TΙ
     Strongly swellable, moderately crosslinked copolymers of vinylpyrrolidone
     and vinyl acetate
IN
     Zhong, Yuanzhen; Wolf, Philip F.
     ISP Investments Inc., USA
PA
SO
     PCT Int. Appl., 22 pp.
     CODEN: PIXXD2
ВΨ
     Patent
LA
     English
FAN.CNT 1
     PATENT NO.
                        KIND DATE
                                               APPLICATION NO. DATE
                       ----
                              ------
PΙ
     WO 9731041
                       A1 19970828
                                               WO 1996-US19887 19961212
         W: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU,
              LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG,
              SI, SK, TJ, TM, TR, TT, UA, UG, UZ, VN, AM, AZ, BY, KG, KZ, MD,
              RU, TJ, TM
         RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML,
              MR, NE, SN, TD, TG
     US 5663258
                              19970902
                                               US 1996-603668
                         А
                                                                  19960220
     AU 9712902
                         A1 19970910
                                               AU 1997-12902
                                                                  19961212
     DE 19681707
                               19990128
                                               DE 1996-19681707 19961212
                         Т
     JP 2000505127
                         T2
                              20000425
                                               JP 1997-530128 19961212
PRAI US 1996-603668
                               19960220
     WO 1996-US19887
                               19961212
     Strongly swellable, moderately crosslinked vinylpyrrolidone-vinyl acetate
     copolymer (XL-PVP/VA) in the form of fine, white powders is characterized by (a) an aq. gel vol. of 15-150 mL/g of polymer, (b) a Brookfield
     viscosity in 5 % aq. soln. of at .gtoreq.10,000 cps, and (c) being prepd.
     directly by pptn. polymn. of VP and VA in the presence of a crosslinking
     agent in the amt. of 0.1-2 wt.% of VP and VA.
     13811-50-2
     RL: RCT (Reactant)
        (crosslinking agent; prepn. of strongly swellable, moderately
        crosslinked copolymers of vinylpyrrolidone and vinyl acetate)
     13811-50-2 HCAPLUS
     2-Imidazolidinone, 1,3-diethenyl- (9CI) (CA INDEX NAME)
```

CH==CH2

сн = сн2

```
=> d bib abs hitstr 3
L63 ANSWER 3 OF 7 HCAPLUS COPYRIGHT 2001 ACS
      1987:555418 HCAPLUS
ΑN
      107:155418
DN
ΤT
      Crosslinked copolymer beads containing epoxy and amino groups
IN
      Mitschker, Alfred; Lange, Peter Michael; Kreiss, Wolfgang
      Bayer A.-G., Fed. Rep. Ger. Ger. Offen., 7 pp.
PΑ
      CODEN: GWXXBX
DT
      Patent
      German
FAN.CNT 1
      PATENT NO.
                          KIND DATE
                                                     APPLICATION NO. DATE
     DE 3543348
                                                     DE 1985-3543348 19851207
EP 1986-116244 19861124
                           A1 19870611
PΙ
                           A2 19870616
      EP 225535
      EP 225535 A2 19870616
EP 225535 A3 19890531
EP 225535 B1 19910515
          R: CH, DE, ES, FR, GB, IT, LI, SE
      US 4772635 A 19880920 US 1986-934877
JP 62153306 A2 19870708 JP 1986-286122
                                                                           19861125
                                                     JP 1986-286122
                                                                           19861202
                           B4 19940518
      JP 06037535
      DK 8605850
                                  19870608
                                                     DK 1986-5850
                            Α
                                                                           19861205
                                 19901002
19941213
      CA 1274948
                           A1
                                                     CA 1986-524634
                                                                          19861205
                           A2
      JP 06340818
                                                      JP 1993-272909
                                                                           19931006
PRAI DE 1985-3543348
                                  19851207
     The title polymers, with good binding capacities for biol. active materials, are prepd. by the reaction of unsatd. glycidyl compds. with
      amines capable of reacting with .gtoreq.2 epoxy groups in the presence of
      pore-forming agents before or during pearl polymn. Stirring 190 g
      glycidyl methacrylate and 10 g ethylenediamine at 40.degree. for 3 h, adding 2 g AIBN in 200 g BuOAc and 1 L 0.2% aq. Me cellulose, and stirring
      at 70.degree. for 15 h gave polymer beads contg. 15.0% epoxy groups and
     2.2% basic amino groups. Stirring 250 g these beads with 1500 g Me2N(CH2)3NH2 at 40.degree. for 20 h gave a weakly basic anion exchanger with exchange capacity 1.52 equiv/L. Quaternization of this resin with
      MeCl gave a strongly basic anion exchanger with exchange capacity 0.4
      equiv/L.
TT
      13811-50-2, N,N'-Divinyl ethylene urea
```

(crosslinking agents, for ethylenediamine-glycidyl methacrylate reaction product polymers)
RN 13811-50-2 HCAPLUS
CN 2-Imidazolidinone, 1,3-diethenyl- (9CI) (CA INDEX NAME)

RL: MOA (Modifier or additive use); USES (Uses)

```
=> d bib abs hitstr 4
```

ANSWER 4 OF 7 HCAPLUS COPYRIGHT 2001 ACS

1983:493790 HCAPLUS AN

DN 99:93790

N-Vinyl lactam-based biomedical devices ТΙ

ΙN Chromecek, Richard Charles; Friends, Gary Dean; Wissman, Lawrence Yarnell; Yourd, Raymond Atchison

PΑ Bausch and Lomb Inc., USA

Eur. Pat. Appl., 34 pp. SO

CODEN: EPXXDW

חת Patent

English

FAN.	CNT	1												
	PATENT NO.			KIND		DATE		APPLICATION NO.			DATE			
ΡI	ΕP	7972	1		A2	2	1983	0525		EP	1982-305	844	19821103	
	ΕP	7972	1		A.	3	1985	0508						
		R:	AT,	BE,	DE,	FR,	GB,	ΙΤ,	NL,	SE				
	US	4436	887		Α		1984	0313		US	1981-320	355	19811112	
	CA	1190	700		A.	1	1985	0716		CA	1982-414	668	19821102	
PRAI	US	1981	-3200	355			1981	1112						
GI														

$$CH_2 - CH_1$$
  $NCH = CH_2$ 

N-Vinyl lactam  ${f crosslinked}$  polymers for biomedical applications, esp. soft contact lenses, have improved O permeability and high H2O absorption when a resonance free di(alkene tertiary amine) cyclic compd. such as N,N'-divinylethylenurea (I) [13811-50-2] is used as the crosslinking agent. Improved tear strength and good machinability
and low extractibles are also obtained. A polymer was prepd. from N-vinylpyrrolidone, Me methacrylate, and cyclohexyl methacrylate. When diallyl maleate or ethylene glycol dimethacrylate (EGDMA) were used as crosslinking agents, the H2O content of the polymer decreased after 120 h extn., whereas I crosslinked polymers did not show changes in H2O content for the same test period. Improvements in other properties such as O, permeability, tensile strength, hydrolytic stability, etc. were shown when using I or I-EGOMA (4:1) as crosslinking agents in a no. of polymer compns.

13811-50-2 RL: MOA (Modifier or additive use); USES (Uses) (crosslinking agent, for vinyl lactam polymers for contact lenses)

RN 13811-50-2 HCAPLUS

2-Imidazolidinone, 1,3-diethenyl- (9CI) (CA INDEX NAME)

# => d bib abs hitstr 5

- L63 ANSWER 5 OF 7 HCAPLUS COPYRIGHT 2001 ACS
- AN 1976:407385 HCAPLUS
- DN 85:7385
- TI Hardenable coating compositions
- IN Barzynski, Helmut; Hartmann, Heinrich; Lautenbach, Dieter; Osterloh, Rolf; Goethlich, Lutz; Heil, Guenter
- PA BASF A.-G., Ger.
- SO Ger. Offen., 21 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

PAN.CNI I							
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE		
ΡI	DE 2441148	A1	19760311	DE 1974-2441148	19740828		
	DE 2441148	C2	19821014				
	NL 7510137	Α	19760302	NL 1975-10137	19750827		
	JP 51050391	A2	19760501	JP 1975-103095	19750827		
	FR 2283187	A1	19760326	FR 1975-26481	19750828		
	FR 2283187	B1	19790330				
	US 4205139	Α	19800527	US 1977-819816	19770728		
	US 4424314	A	19840103	US 1979-77816	19790924		
PRAI	DE 1974-2441148		19740828				
	US 1975-603445		19750811				
	US 1977-819816		19770728				

- AB Radiation-curable coatings with improved crosslink d. and reduced curing time, useful in photoresists, printing inks, etc., contain polyenes with mol. wt. 70-20,000 and b. >50.degree. and divinylurea derivs. with mol. wt. 110-2000. Thus, a mixt. of 2:1:3.05 maleic anhydride-phthalic anhydride-1,2-propanediol polymer (I) [25037-66-5] (acid no. 45 mg KOH/g) 37, tetramethylene acrylate (II) 50, 2-(diethylamino)ethyl acrylate (III) stabilizer 3, and N,N'-divinylpropyleneurea [28084-37-9] 10% coated to 60 .mu. on steel sheet and exposed at 40 m/min to 320 kV, 50 mA electron beams has surface scratch-resistant and tack-free and Koenig pendulum hardness 175 sec; compared with tacky and 20 sec, resp., for a 37:60:3 I-II-III mixt.
- IT 13811-50-2
  - RL: MOA (Modifier or additive use); USES (Uses)
  - (crosslinking agents, for polyenes coatings by radiation)
- RN 13811-50-2 HCAPLUS
- CN 2-Imidazolidinone, 1,3-diethenyl- (9CI) (CA INDEX NAME)

## => d bib abs hitstr 6

- L63 ANSWER 6 OF 7 HCAPLUS COPYRIGHT 2001 ACS
- AN 1976:17770 HCAPLUS
- DN 84:17770
- ${\tt TI}$  N,N'-Divinylureas. Polymerization studies and spectroscopic investigation of structure
- AU Corfield, G. C.; Crawshaw, A.; Monks, H. H.
- CS Dep. Chem. Biol., Sheffield Polytech., Sheffield, Engl.
- SO J. Macromol. Sci., Chem. (1975), A9(7), 1085-111 CODEN: JMCHBD
- DT Journal
- LA English
- GI For diagram(s), see printed CA Issue.
- AB Homopolymn. of 1,3-divinyl-2-imidazolidone (I, R, = vinyl) [
  13811-50-2] and of 1, 3-divinylhexahydro-2-pyrimidinone (II)
  [28084-37-9] gave crosslinked, insoluble polymers, while that of
  1-ethyl-3-vinyl-2-imidazolidone (I, R = Et) [57490-45-6] gave a soluble,
  linear polymer. 1,3-Diphenyl-1,3-divinylurea [28084-38-0] and
  1,3-dimethyl-1,3-divinylurea [57491-89-1] did not polymerize. Spectral
  evidence indicated conjugation of the electron pairs on the nitrogen atom
  with the .pi.-electrons of the vinyl and carbonyl double bonds in all the
  divinylureas, with such conjugation favoring intermol. propagation rather
  than cyclopolymn. The lack of polymn. of the diphenyldivinylurea was
  attributed to the formation of resonance-stabilized free radicals, while
  that of the dimethyldivinylurea was attributed to steric hindrance. Both
  these compds. hydrolyzed rapidly in aq. soln. to give acetaldehyde and the
  corresponding urea.

# => d bib abs hitstr 7

```
L63 ANSWER 7 OF 7 HCAPLUS COPYRIGHT 2001 ACS AN 1972:502602 HCAPLUS
```

DN 77:102602

TI Poly(N-vinyl-2-pyrrolidinone)

IN Hofmann, Ernst; Herrle, Karl

PA Badische Anilin- und Soda-Fabrik A.-G.

GO Ger. Offen., 10 pp. CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO. DATE
PI	DE 2059484	Α	19720615	DE 1970-2059484 19701203
	DE 2059484 DE 2059484	B2 C3	19730802 19740307	
	CH 567533	Α .	19751015	CH 1971-15657 19711027
	FR 2117115	A5	19720721	FR 1971-41676 19711122
	IT 951644	Α	19730710	IT 1971-54388 19711127
	NL 7116386	A	19720606	NL 1971-16386 19711129
	BE 776047	A1	19720530	BE 1971-111100 19711130
	AT 307043	В	19730510	AT 1971-10378 19711202
	CA 946547	A1	19740430	CA 1971-129172 19711202
	GB 1362044	Α	19740730	GB 1971-55929 19711202
	DK 135135	В	19770307	DK 1971-5902 19711202
	JP 54030027	B4	19790927	JP 1971-96830 19711202
PRAI	DE 1970-2059484		19701203	

Insol. and only slightly swellable poly(N-vinyl-2-pyrrolidinone) (I) [9003-39-8] was prepd. by Bz2O2-initiated polymn. in H2O in the presence of the **crosslinking** agents N,N'-divinyl-2-imidazolidinone (II) [ 13811-50-2] or N,N'-divinyl-2-oxohexahydropyrimidine [28084-37-9] in the presence of iron [7439-89-6] or zinc [7440-66-6]. Thus, N-vinylpyrrolidinone 100, H2O 100, II 1, and Bz2O2 0.005 part in the presence of a Fe ring (15 .tim. 15 mm) were heated to 35.deg. (I became visible after .sim.90 min at the Fe surface and the temp. rose to 102.deg.) to give 90 parts I insol. in, e.g., common hydrocarbons, alcs., ethers, ketones, and org. halo compds.

```
=> d bib abs hitstr
L73 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2001 ACS
ΑN
     1999:265961 HCAPLUS
     130:325498
DN
     Use of cationic copolymers obtained from unsaturated acids and N- \,
ТT
     vinylimidazolium salts in cosmetic hair preparations
ΙN
     Dieing, Reinhold; Hoessel, Peter; Sanner, Axel
PA
     BASF A.-G., Germany
     Ger. Offen., 8 pp.
SO
     CODEN: GWXXBX
DТ
     Patent
     German
LA
FAN.CNT 1
     PATENT NO.
                                             APPLICATION NO. DATE
                       KIND DATE
                       ----
     DE 19745637
                             19990422
PΙ
                        A1
                                              DE 1997-19745637 19971016
                       A1 19990428
     EP 911018
                                             EP 1998-118850 19981006
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO
                                              CA 1998-2248241 19981008
CN 1998-124133 19981016
                   AA 19990416
     CA 2248241
     CN 1220275
                        Α
                              19990623
PRAI DE 1997-19745637
                             19971016
     Cationic polymers obtained by radical polymn. of a mixt. of
     (un) substituted N-vinylimidazole of specified structure 60-99,
     ethylenically-unsatd. polymerizable acid or salt 1-40 and other monomer
     0-30% (based on total monomers) and quaternization, are useful for the
     title purpose. For example, methacrylic acid was neutralized in H2O with
     aq. NaOH, combined with 3-methyl-1-vinylimidazolium chloride and
     the mixt. polymd. under N in the presence of 2,2'-azobis(2-aminopropane)-
     HCl to give a title copolymer which was used in a hair shampoo
     formulation.
     223720-51-2P, 3-Methyl-1-vinylimidazolium
     chloride-Sodium methacrylate copolymer 223720-56-7P, 2-Acrylamido-2-methyl-1-propanesulfonic acid-3-Methyl-1-
     vinylimidazolium chloride-Sodium methacrylate copolymer
     RL: IMF (Industrial manufacture); TEM (Technical or engineered material
     use); PREP (Preparation); USES (Uses)
        (cationic copolymers obtained from unsatd. acids and N-vinylimidazolium salts manufd. for use in cosmetic hair
        prepns.)
RN
     223720-51-2 HCAPLUS
     1H-Imidazolium, 1-ethenyl-3-methyl-, chloride, polymer with sodium
     2-methyl-2-propenoate (9CI) (CA INDEX NAME)
     CM
     CRN 13474-25-4
     CMF C6 H9 N2 . C1
 Me
      CH = CH_2
    ● c1-
*** FRAGMENT DIAGRAM IS INCOMPLETE ***
     CM
     CRN 5536-61-8
```

```
CMF C4 H6 O2 . Na
     CH<sub>2</sub>
Me C CO2H
    ● Na
     223720-56-7 HCAPLUS
RN
      1H-Imidazolium, 1-ethenyl-3-methyl-, chloride, polymer with 2-methyl-2-[(1-oxo-2-propenyl)amino]-1-propanesulfonic acid and sodium 2-methyl-2-propenoate (9CI) (CA INDEX NAME)
       CM
       CRN 15214-89-8
CMF C7 H13 N O4 S
          0
     NH C CH CH2
Me C CH2 SO3H
    Ме
       CM 2
       CRN 13474-25-4
CMF C6 H9 N2 . C1
  Ме
  N
    N
        CH CH2
     ● cl-
*** FRAGMENT DIAGRAM IS INCOMPLETE ***
       CM 3
       CRN 5536-61-8
CMF C4 H6 O2 . Na
     CH<sub>2</sub>
Me C CO2H
```

```
=> d bib abs hitstr 1
L74 ANSWER 1 OF 9 HCAPLUS COPYRIGHT 2001 ACS
     2001:563771 HCAPLUS
     135:157364
DN
     Cosmetic compositions containing an amphoteric starch and a cationic
ΤŢ
     conditioning agent
ΙN
     Douin, Veronique; Chesneau, Laurent; Descoster, Sandrine
     L'Oreal S.A., Fr.
Eur. Pat. Appl., 26 pp.
PΑ
SO
     CODEN: EPXXDW
DT
     Patent
     French
FAN.CNT 1
     PATENT NO.
                      KIND DATE
                                           APPLICATION NO. DATE
                      ----
                     A1 20010801
                                         EP 2000-403529 20001214
     EP 1120103
PΙ
        R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, SI, LT, LV, FI, RO
     FR 2803745
                    A1
                            20010720
                                           FR 2000-409
                                                            20000113
     CN 1305801
                                           CN 2001-103011
                            20010801
                       Α
                                                            20010112
     JP 2001226217
                       A2
                            20010821
                                           JP 2001-7088
                                                            20010115
PRAI FR 2000-409
                       Α
                            20000113
    MARPAT 135:157364
    Cosmetic compns. contg. an amphoteric starch and a cationic conditioning
AB
     agent chosen from quaternary ammonium surfactants and cationic polymers
     having quaternary ammonium group, and cationic silicones. A shampoo
     contained potato starch modified by 2-chloroethyl aminodipropionic acid
     1.5, diallyl di-Me ammonium chloride homopolymer (Merquat 100)
     0.5, and water q.s. 100.0 g.
TΥ
     25136-75-8, Merquat 3300
     RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
     (Uses)
        (cosmetic compns. contg. amphoteric starch and cationic conditioning
        agent)
     25136-75-8 HCAPLUS
RN
     2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, polymer with
     2-propenamide and 2-propenoic acid (9CI) (CA INDEX NAME)
     CM
     CRN 7398-69-8
     CMF C8 H16 N . Cl
             Ме
              \<del>^+</del> сн2− сн== сн2
H_2C = CH - CH_2
             Me
            ● c1-
     CM
          2
     CRN 79-10-7
     CMF C3 H4 O2
     - CH=== CH2
```

CM 3

CRN 79-06-1 CMF C3 H5 N O

0

H<sub>2</sub>N C CH CH<sub>2</sub>

RE.CNT 4 RE

- (1) L'Oreal; EP 0797979 A 1997 HCAPLUS
  (2) National Starch; http://www.nationalstarch.com/solan.htm/ 2000
  (3) National Starch And Chem Corp; EP 0689829 A 1995 HCAPLUS
  (4) National Starch And Chem Corp; EP 0948960 A 1999 HCAPLUS

```
=> d bib abs hitstr 2
L74 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2001 ACS
     2001:338797 HCAPLUS
AN
     134:354507
DN
TI
     Coating for treating substrates for ink jet printing including imbibing
     solution for enhanced image visualization and retention, method for
     treating said substrates, and articles produced therefrom
     Bagwell, Alison Salyer; Branham, Kelly Dean; Kister, Mary Elizabeth;
ΙN
     Zelazoski, Leonard Eugene
     Kimberly-Clark Worldwide, Inc., USA
PΑ
     PCT Int. Appl., 53 pp.
SO
     CODEN: PIXXD2
DТ
     Patent
LA
     English
FAN.CNT 1
     PATENT NO.
                       KIND DATE
                                             APPLICATION NO. DATE
ΡI
     WO 2001032974
                       A2
                             20010510
                                             WO 2000-US30000 20001031
         W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR,
             HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT,
             LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU,
             ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
             DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ,
             CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
PRAI US 1999-163741
                          19991104
                      P
     US 2000-702093
                       Α
                             20001030
     An aq. coating formulation contg. solids, for enhancing image
     visualization and retention of dye-based inks, comprises: (a) a cationic
     polymer or copolymer, (b) a fabric softener, (c) urea, and (d)
     an ingredient selected from sodium bicarbonate, sodium carbonate or
     ammonium sulfate. The printed substrate has improved adhesion,
     colorfastness and washfastness to reactive or acid dye-based ink jet inks.
     25970-26-7, Diallyldimethylammonium chloride-diacetone
     acrylamide copolymer
     RL: TEM (Technical or engineered material use); USES (Uses)
        (Calgon CP 7091RV; coating for treating substrates for ink jet printing
        including imbibing soln. for enhanced image visualization and
        retention, method for treating said substrates, and articles produced
        therefrom)
ŔN
     25970-26-7 HCAPLUS
     \hbox{2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, polymer with}\\
     N-(1,1-dimethyl-3-oxobutyl)-2-propenamide (9CI) (CA INDEX NAME)
     CM
     CRN 7398-69-8
CMF C8 H16 N . C1
              Me
              № - Сн<sub>2</sub>- Сн== Сн<sub>2</sub>
H_2C = CH - CH_2
              Me
             ● cl-
     CM
          2
     CRN 2873-97-4
```

CMF C9 H15 N O2

```
=> d bib abs hitstr 3
L74 ANSWER 3 OF 9 HCAPLUS COPYRIGHT 2001 ACS
AN
     2001:165716 HCAPLUS
      134:214934
DN
     Thermal imaging composition as well as direct write lithographic printing
ΤI
      plate containing cationic IR dye, and method of imaging and printing
      Felming, James C.; Leon, Jeffrey W.; Stegman, David A.; Williams, Kevin W.
ΙN
      Eastman Kodak Co., USA
     Ger. Offen., 26 pp.
      CODEN: GWXXBX
ידמ
     Patent
LA
     German
FAN.CNT 1
      PATENT NO.
                         KIND DATE
                                                 APPLICATION NO. DATE
                                                  _____
     DE 10042293
                                20010308
PΤ
                         A1
                                                 DE 2000-10042293 20000829
     JP 2001162965
                          A2
                                20010619
                                                  JP 2000-306855 20000831
                        A
PRAI US 1999-387116
                                19990831
OS
     MARPAT 134:214934
     The invention relates to the neg.-working lithog. printing plate or
      cylinder in which the hydrophilic imaging layer is made up of
      heat-sensitive hydrophilic ionomer and IR-sensitive dye with several
     quaternary ammonium groups. Heat is generated by IR laser irradn. The heat-sensitive polymer is considered "switchable" in response to heat, and provides the lithog. image without wet processing. The IR dyes and the
      heat-sensitive hydrophilic ionomers were synthesized.
     264255-38-1P, 1-Viny1-3-methylimidazolium
     methanesulfonate-N-(3-aminopropyl)methacrylamide hydrochloride copolymer RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
         (prepn. of heat-sensitive hydrophilic ionomer for direct write lithog.
         printing plate)
RN
      264255-38-1 HCAPLUS
      1H-Imidazolium, 1-ethenyl-3-methyl-, methanesulfonate, polymer with
     N-(3-aminopropyl)-2-methyl-2-propenamide monohydrochloride (9CI) (CA
     INDEX NAME)
     CM
          1
     CRN 72607-53-5
     CMF \, C7 H14 N2 O \, C1 H
 H<sub>2</sub>C O
Me-C-C-NH-(CH_2)_3-NH_2
          HC1
     CM
           2
     CRN 264255-37-0
     CMF C6 H9 N2 . C H3 O3 S
           CM
                 3
```

CRN 45534-45-0 CMF C6 H9 N2

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

¬м 4

CRN 16053-58-0 CMF C H3 O3 S

```
=> d bib abs hitstr 4
L74
     ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2001 ACS
     2000:688437 HCAPLUS
AN
     133:268175
DN
     Substrate coatings, methods for treating substrates for ink jet printing,
TΙ
     and coated textile articles
     Branham, Kelly Dean; Bagwell, Alison Salyer; Gordon, Alice Susan;
     Zelazoski, Leonard Eugene
PA
     Kimberly-Clark Worldwide, Inc., USA
     PCT Int. Appl., 46 pp.
SO
     CODEN: PIXXD2
DT
     Patent
     English
LA
FAN.CNT 1
     PATENT NO.
                       KIND DATE
                                               APPLICATION NO. DATE
      -----
                               -----
                         A1 20000928
     WO 2000056972
                                               WO 2000-US7887
                                                                 20000323
          W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU,
              CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,
              MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI,
              SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
          RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BF, CF,
              CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
126198 P 19990325
PRAI US 1999-126198
AB A wide array of textile fabric substrates can be treated to improve the
     colorfastness and washfastness of ink jet ink formulations. The aq.
     treatment includes .apprx.5-95% cationic polymers or copolymers, and
     .apprx.5-20% fabric softeners, addnl., .apprx.0-80% polymeric latex binder
     to increase washfastness. Cotton poplin was padded with a soln. contg.
     diacetone acrylamide-diallyldimethylammonium chloride polymer,
     Varisoft 222 softener, and water, laminated with an adhesive paper,
     printed and dried.
     25970-26-7, Diacetone acrylamide-diallyldimethylammonium
     chloride polymer
     RL: TEM (Technical or engineered material use); USES (Uses)
         (coated textile substrate for ink jet printing articles and laminates
         showing colorfastness and washfastness and improved ink adhesion)
RN
     25970-26-7 HCAPLUS
     2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, polymer with N-(1,1-dimethyl-3-oxobutyl)-2-propenamide (9CI) (CA INDEX NAME)
     CM
         1
     CRN 7398-69-8
     CMF C8 H16 N . Cl
               Ме
H_2C = CH - CH_2 - N^{+} - CH_2 - CH = CH_2
               Me
             ● c1-
     CM
     CRN 2873-97-4
     CMF C9 H15 N O2
```

$$\begin{array}{c} \text{O} \\ || \\ || \\ \text{H}_2 \text{C} = \text{CH} - \text{C} - \text{NH} \quad \text{O} \\ || \\ || \\ || \\ \text{Me} - \text{C} - \text{CH}_2 - \text{C} - \text{Me} \\ || \\ || \\ \text{Me} \end{array}$$

RE.CNT 6

RE

- (1) Alfekri, D; US 6001137 A 1999 HCAPLUS
  (2) Basf Ag; DE 19643281 A 1998 HCAPLUS
  (3) Hornby, J; US 5869442 A 1999 HCAPLUS
  (4) Kimberly Clark Co; EP 0842786 A 1998 HCAPLUS
  (5) Kimberly Clark Co; WO 9843821 A 1998 HCAPLUS
  ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
=> d bib abs hitstr 5
L74 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2001 ACS
     1997:402901 HCAPLUS
AN
     127:18413
DN
TΤ
     Preparing polymer powders which are redispersible in aqueous media
IN
     Pakusch, Joachim; Dieing, Reinhold; Tropsch, Juergen
PA
     BASF A.-G., Germany
     Eur. Pat. Appl., 23 pp.
SO
     CODEN: EPXXDW
DT
     Patent
     German
FAN.CNT 1
     PATENT NO.
                       KIND DATE
                                             APPLICATION NO. DATE
                       _ _ _ _
     EP 770640
PΤ
                       A2
                             19970502
                                             EP 1996-116679 19961017
     EP 770640
                       A3 19971029
     R: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LI, NL, PT, SE
DE 19540305 A1 19970430 DE 1995-19540305 19951028
                        AA 19970429
     CA 2188685
                                             CA 1996-2188685 19961023
    US 5874524
                        Α
                             19990223
                                             US 1996-731989
                                                               19961023
                       A1 19970501
     AU 9670406
                                             AU 1996-70406
                                                                19961025
     JP 09169812
                       A2
                             19970630
                                             JP 1996-285586
                                                               19961028
                                             CN 1996-122881
     CN 1153181
                             19970702
                                                                19961028
                        Α
PRAI DE 1995-19540305
                             19951028
     Polymer powders which disperse in aq. media so that the dispersed
     particles have pos. or neg. surface elec. charges are manufd. by
     spray-drying mixts. dispersions of the polymers such as those of
     (meth)acrylate esters, styrene, and vinyl compds. and polyelectrolytes
     which act as drying aids and are composed of polyions that have elec.
     charges different than that on the surfaces of the dispersed polymer
     particles. These powders are useful as hydraulic binder additives,
     paints, varnishes, adhesives, paper coatings, and synthetic resin plaster. A typical spray-dried compn. contained anionically stabilized dispersion
     of 11.2:219.2:5.6:252 acrylamide-Bu acrylate-methacrylamide-styrene
     copolymer and 15% 120:280 3-methyl-1-vinylimidazolium Me
     sulfate-vinylpyrrolidone copolymer.
     95144-24-4P, 3-Methyl-1-vinylimidazolium
     chloride-N-vinylpyrrolidone copolymer
     RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP
     (Preparation); USES (Uses)
        (prepg. polymer powders contg. polyelectrolytes which are redispersible
     in aq. media)
95144-24-4 HCAPLUS
RN
     1H-Imidazolium, 1-ethenyl-3-methyl-, chloride, polymer with
CN
     1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)
     CM
          1
     CRN 13474-25-4
CMF C6 H9 N2 . C1
      CH = CH_2
```

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

• c1-

CM 2

CRN 88-12-0 CMF C6 H9 N O

```
=> d bib abs hitstr 6
L74 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2001 ACS
     1996:571852 HCAPLUS
ΑN
DN
     125:198917
     Improving the strength of paper made from pulp containing surface active
TΙ
     carboxyl compounds
TN
     Dickerson, Jay A.; Goldy, Harry Joseph; Smith, Douglas Charles; Staib,
     Ronald Richard
     Hercules Inc., USA
Eur. Pat. Appl., 16 pp.
PA
SO
     CODEN: EPXXDW
DT
     Patent
LA
     English
FAN.CNT 1
     PATENT NO.
                      KIND DATE
                                            APPLICATION NO. DATE
                      ----
                             _____
                       A2
PΙ
     EP 723047
                             19960724
                                            EP 1996-100345
                                                             19960111
     EP 723047
                       A3 19970924
         R: AT, BE, DE, ES, FR, GB, IT, SE
     US 6228217
                            20010508
                                            US 1995-372083
                                                              19950113
                       в1
     CA 2167024
                       AA 19960714
                                            CA 1996-2167024 19960111
     FI 9600135
                       Α
                             19960714
                                            FI 1996-135
                                                              19960111
     AU 9640965
                           19960725
                                            AU 1996-40965
                       A1
                                                              19960112
     AU 698805
                             19981105
                       B2
     BR 9600096
                                            BR 1996-96
                       Α
                             19980127
                                                              19960115
     JP 08232191
                       A2
                           19960910
                                            JP 1996-5002
                                                              19960116
PRAI US 1995-372083
                       Α
                             19950113
     The use of a compd. contg. a multivalent cation such as alum with
     water-sol. anionic polymers and water-sol. cationic polymers improves the
     strength of paper made from pulps contg. carboxyl compd. surfactants. The
     anionic component is added or already present in the pulp suspensions.
     26590-05-6, Acrylamide-diallyldimethylammonium chloride
     copolymer
     \mathtt{RL}\colon \mathtt{MOA} (Modifier or additive use); \mathtt{TEM} (Technical or engineered material
     use); USES (Uses)
        (improving the strength of paper made from pulp contg. surface active
        carboxyl compds.)
     26590-05-6 HCAPLUS
     \hbox{2-Propen-1-aminium, $N$, $N$-dimethyl-$N-2$-propenyl-, chloride, polymer with}\\
CN
     2-propenamide (9CI) (CA INDEX NAME)
     CM
     CRN 7398-69-8
     CMF C8 H16 N . C1
              Me
H_2C = CH - CH_2
              N-
                 - Сн2- Сн= Сн2
              Мe
```

● c1-

CM 2

CRN 79-06-1 CMF C3 H5 N O

```
=> d bib abs hitstr 7
L74 ANSWER 7 OF 9 HCAPLUS COPYRIGHT 2001 ACS
     1996:142229 HCAPLUS
AN
     124:185145
DN
TΙ
     Hair-cleansing and -strengthening composition containing anionic
     surfactant, ionic polymers, and insoluble component
IN
     Schroeder, Friedel; Stiehm, Thomas
     Wella AG, Germany
PΑ
     Ger. Offen., 10 pp.
SO
     CODEN: GWXXBX
DΤ
     Patent
LA
     German
FAN.CNT 1
     PATENT NO.
                      KIND DATE
                                            APPLICATION NO. DATE
                      ____
                             -----
                                             _____
PΙ
     DE 4420880 A1 19951221
                                            DE 1994-4420880 19940615
     WO 9534271
                       A1 19951221
                                            WO 1995-EP739
                                                             19950301
         W: BR, JP, US
         RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
     EP 713382
                      A1 19960529
                                            EP 1995-910539
                                                             19950301
         R: DE, ES, FR, GB, IT
     JP 09501956 T2 19970225
                                            JP 1995-501523
                                                              19950301
                             19970812
     BR 9506264
                                            BR 1995-6264
                                                              19950301
                       Α
PRAI DE 1994-4420880
                             19940615
     WO 1995-EP739
                             19950301
     MARPAT 124:185145
     A liq. hair cleanser which simultaneously promotes retention of the \,
     coiffure contains anionic surfactant 1-20, cationic polymer 0.1-2,
     neutralized anionic polymer 0.1-5, and an insol. component 0.1-5 wt.% with
     a mean particle size of 1-200 .mu.m comprising nylon powder, polyethylene
     powder, or poly(Me methacrylate) powder. Thus, a cleansing compn.
     contained ethoxylated Na lauryl ether sulfate 11.20, Polymer JR (polymeric quaternary ammonium salt of hydroxyethylcellulose) 1.00, Resyn 28-2930
     (vinyl acetate/crotonic acid/vinyl neodecanoate copolymer) 0.50,
     Orgasol 2002 (nylon powder) 0.50, NaOH 0.20, citric acid 0.10, and H2O
     86.50 g.
     26590-05-6, Diallyldimethylammonium chloride/acrylamide
     copolymer
     RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
        (hair-cleansing and -strengthening compn. contg. anionic surfactant,
        ionic polymers, and insol. component)
     26590-05-6 HCAPLUS
RN
     \hbox{2-Propen-1-aminium, $N$, $N$-dimethyl-$N$-2-propenyl-, chloride, polymer with }
CN
     2-propenamide (9CI) (CA INDEX NAME)
     CM
     CRN 7398-69-8
     CMF C8 H16 N . C1
              Me
             – N<del>.,</del>
H_2C = CH - CH_2
                 -CH_2-CH=-CH_2
              Me
            ● c1-
     CM
          2
```

CRN 79-06-1 CMF C3 H5 N O

```
=> d bib abs hitstr 8
L74 ANSWER 8 OF 9 HCAPLUS COPYRIGHT 2001 ACS
     1994:510208 HCAPLUS
AN
     121:110208
DN
     Induction of Aggregate Formation of Cationic Polysoaps and Surfactants by
ΤI
     Low Concentrations of Additives in Aqueous Solution
     Wang, Guang-Jia; Engberts, Jan B. F. N.
     Department of Organic and Molecular Inorganic Chemistry, University of
     Groningen, Nijenborgh, 9747 AG, Neth.
SO
     Langmuir (1994), 10(8), 2583-7
     CODEN: LANGD5; ISSN: 0743-7463
\mathsf{DT}
     Journal
LA
     English
     The induction of aggregate formation of cationic polysoaps
     (N-dodecyl-N-methyl-3, 4-diallylpyrrolidinium
     bromide-N, N-dimethyl-3, 4-diallylpyrrolidinium bromide copolymer
     (I) and N, N'-methylenebis (acrylamide) - crosslinked I),
     cetyltrimethylammonium bromide (CTAB), n-dodecyltrimethylammonium bromide
     (DTAB), and n-dodecylmethyldiallylammonium bromide (DMDAAB) by
     low concns. of Methyl orange (10-5-10-4 M) and anionic surfactants
     (concns. below their crit. micelle concs.(cmc)) in ag. solns. was studied
     using UV-visible absorption and fluorescence spectroscopy. Reduced
     viscosities were also investigated as a function of polysoap concn. in the
     presence of low concns. of the same additives. It was found that the
     cationic polysoaps, CTAB, DTAB, and DMDAAB aggregate far below their
     normal cmc in the presence of Methyl orange in aq. soln. The cationic
     polysoaps exhibited an about 5-fold decrease of the reduced viscosity in
     the presence of the hydrophobic anionic additives but no decrease of the
     reduced viscosity was found in the presence of hydrophobic nonionic
     additives and cationic additives (CTAB, DTAB). Depending on the length of
     the alkyl chains of the org. anionic additives, a conformational
     transition of the cationic polysoaps was indicated by changes of the reduced viscosity. Pyrene was used as a fluorescence probe to investigate the conformational state of the crosslinked cationic polysoap I
     in the presence of low concns. of additives. Pyrene fluorescence spectra
     revealed the formation of hydrophobic microdomains in the presence of the
     hydrophobic anionic additives depending on the length of alkyl chains. These domains were not obsd. in the case of hydrophobic cationic additives
     and nonionic additives.
     156789-08-1, 3,4-Diallyl-N-dodecyl-N-methylpyrrolidinium
     bromide-3, 4-diallyl-N, N-dimethylpyrrolidinium
     bromide-N, N'-methylenebis (acrylamide) copolymer
     RL: PRP (Properties)
        (aggregation of, in aq. solns. contg. surfactants and anionic dye)
RN
     156789-08-1 HCAPLUS
     1-Dodecanaminium, N-methyl-N, N-di-2-propenyl-, bromide, polymer with
     N, N-dimethyl-N-2-propenyl-2-propen-1-aminium bromide and
     N, N'-methylenebis[2-propenamide] (9CI) (CA INDEX NAME)
     CM 1
     CRN 41454-28-8
```

CMF C19 H38 N . Br

\_ \_ -

● Br~

CM 2

CRN 14764-64-8 CMF C8 H16 N . Br

Me

H<sub>2</sub>C CH CH<sub>2</sub> N<sup>+</sup> CH<sub>2</sub> CH CH<sub>2</sub>

Me

• Br-

CM 3

CRN 110-26-9 CMF C7 H10 N2 O2

0 0

 ${\rm H_2C}$  CH C NH CH2 NH C CH CH2

```
=> d bib abs hitstr 9
L74
     ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2001 ACS
     1980:591912 HCAPLUS
AN
     93:191912
DN
     Cosmetic composition for strengthening brittle and/or fragile nails
TT
IN
     Bouillon, Claude; Abegg, Jean Louis; Koulbanis, Constantin; Darmenton,
     Oreal S. A., Fr.
PΑ
     Ger. Offen., 30 pp.
SO
     CODEN: GWXXBX
DΤ
     Patent
     German
LA
FAN.CNT 1
     PATENT NO.
                       KIND DATE
                                              APPLICATION NO. DATE
PΙ
     DE 2948342 A1 19800619
                                              DE 1979-2948342 19791130
     FR 2442632
                              19800627
                                              FR 1978-33965
                        A1
                                                                19781201
                        B1 19821105
     FR 2442632
                        A
                                                                19791127
                             19830426
                                              US 1979-98330
     US 4381294
     GB 2041386
                        Α
                             19800910
                                              GB 1979-41454
                                                                19791130
     GB 2041386
                        В2
                            19830525
     GB 2110224
                        A1
                              19830615
                                              GB 1982-15569
                                                                19820527
     GB 2110226
                             19830615
                                              GB 1982-15576
                                                                19820527
                        A1
PRAI FR 1978-33965
                              19781201
     GB 1979-41454
                              19791130
     The title compns. contain cationic polymers (polyaminopolyamides) and
     adjuvant materials such as paraffin oil, polyglycerol alkyl ethers, and other polymers in an oil-in-H2O emulsion. A compn. was prepd. contg.
     polyglycerol alkyl ethers 20, paraffin oil 9.6, adipic
     acid-diethylenetriamine crosslinked with epichlorohydrin
     (polyaminoamide) 0.5, Gafquat 755 [37348-63-3] 1.5, perfume 0.2, and
     demineralized H2O, q.s. to 100 g.
TΤ
     26590-05-6
     RL: BIOL (Biological study)
        (nail strengthening compn. contg.)
RN
     26590-05-6 HCAPLUS
     2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, polymer with 2-propenamide (9CI) (CA INDEX NAME)
     CM 1
     CRN 7398-69-8
CMF C8 H16 N . C1
              Ме
H_2C = CH - CH_2 - N + CH_2 - CH = CH_2
              Me
             ● c1-
     CM
     CRN 79-06-1
     CMF C3 H5 N O
H2N-C-CH= CH2
```

```
=> d his
     (FILE 'HOME' ENTERED AT 08:16:21 ON 12 SEP 2001)
     FILE 'HCAPLUS' ENTERED AT 08:16:35 ON 12 SEP 2001
              12 S HOSSEL P?/AU
5 S WUNSCH T?/AU
L1
L2
L3
              21 S DIEING R?/AU
L4
              37 S L1-3
              25 S L4 AND COPOLYMER
L5
            1971 S ?VINYLIMIDAZOL?
1527 S ?DIALLYLAMIN?
1.6
L7
L8
               9 S L5 AND L6-7
                 SELECT RN L8 1-9
     FILE 'REGISTRY' ENTERED AT 08:24:04 ON 12 SEP 2001
L9
              58 S E1-58
     FILE 'HCAPLUS' ENTERED AT 08:24:24 ON 12 SEP 2001

9 S L8 AND L9

9 Cites by 58 Compounds displayed

81576 S FREE RADICAL? OR AIBN
L10
L11
L12
            120 S L6-7 AND L11
L13
          226850 S ?CROSSLINK? OR ?CROSS(W) LINK? OR ?CROSS LINK?
L14
              21 S L12 AND L13
              21 S L14 NOT L10
L15
         904136 S UV OR SUN OR RADIATION OR SUNSCREEN OR COSMETIC?
L16
L17
          49764 S HAIR OR SHAMPOO OR CONDITIONER
              3 S L15 AND L16-17
                 SELECT RN L18 1-3
     FILE 'REGISTRY' ENTERED AT 08:33:27 ON 12 SEP 2001
L19
              45 S E59-103
     FILE 'HCAPLUS' ENTERED AT 08:34:02 ON 12 SEP 2001
                                 3 cites of 45 cpds displayed
L20
               3 S L18 AND L19
```

```
=> d bib abs hitstr 1
L20 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2001 ACS
AN
     1998:293538 HCAPLUS
     128:322102
ΤI
     Waterborne latex compositions having low temp. or UV reactive
     pendant functional groups and preparing latexes
ΙN
     Dougherty, Shawn Marie
PA
     Eastman Chemical Co., USA
     PCT Int. Appl., 28 pp.
     CODEN: PIXXD2
DΤ
     Patent
LA
     English
FAN.CNT 1
     PATENT NO.
                       KIND DATE
                                            APPLICATION NO. DATE
PΤ
     WO 9818832
                            19980507
                       A1
                                             WO 1997-US19298 19971024
         W: CA, JP, MX
         RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
     US 5962584 A 19991005 US 1997-906660 19970807
EP 935618 A1 19990818 EP 1997-912915 19971024
         R: DE, FR, GB, IT
PRAI US 1996-30169
                             19961031
     US 1997-906660
                             19970807
     WO 1997-US19298
                            19971024
     Crosslinkable latex compns. for coatings are formed by
     free-radical emulsion polymn. of monoethylenically
     unsatd. monomers contg. an amide functionality and optionally, addnl.
     copolymerizable monoethylenically unsatd. monomers. The amide
     functionality on the polymer is transformed into isocyanate and/or amine
     groups by addn. of an alkali hypohalide. The polymer includes NCO- or
     NH2-reactive crosslinking additive to further facilitate
     crosslinking of the latex. Thus, Bu acrylate, Me methacrylate,
     and methacrylamide were emulsion polymd. to a latex having diam. 229 nm, mixed with A-1110, and crosslinking initiated with 10 g NaOCl
     (9.44% Cl)/100 g latex.
     7681-52-9, Sodium hypochlorite
     RL: NUU (Nonbiological use, unclassified); USES (Uses)
        (crosslinkable latexes formed by in-situ generation of a
        crosslinkable isocyanate and amine functionality)
     7681-52-9 HCAPLUS
RN
     Hypochlorous acid, sodium salt (8CI, 9CI) (CA INDEX NAME)
CN
CI - OH

⊕ Na

     105-45-3, Methyl acetoacetate 124-02-7,
     Diallylamine 868-77-9 923-26-2
     13822-56-5, A-1110 14276-67-6, Neopentylglycol
     bisacetoacetate 21282-97-3 30584-69-1, Vinylbenzyl
     alcohol
     RL: MOA (Modifier or additive use); USES (Uses)
        (crosslinking additive; crosslinkable latexes
        formed by in-situ generation of a crosslinkable isocyanate
        and amine functionality)
     105-45-3 HCAPLUS
RN
     Butanoic acid, 3-oxo-, methyl ester (9CI) (CA INDEX NAME)
CN
```

Me- C- CH2- C- OMe

124-02-7 HCAPLUS

CN 2-Propen-1-amine, N-2-propenyl- (9CI) (CA INDEX NAME)

 $H_2C = CH - CH_2 - NH - CH_2 - CH = CH_2$ 

RN 868-77-9 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxyethyl ester (9CI) (CA INDEX NAME)

RN 923-26-2 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, 2-hydroxypropyl ester (9CI) (CA INDEX NAME)

RN 13822-56-5 HCAPLUS

CN 1-Propanamine, 3-(trimethoxysilyl)- (9CI) (CA INDEX NAME)

OMe | | MeO- Si- (CH<sub>2</sub>)<sub>3</sub>-NH<sub>2</sub> | OMe

RN 14276-67-6 HCAPLUS

CN Butanoic acid, 3-oxo-, 2,2-dimethyl-1,3-propanediyl ester (9CI) (CA INDEX NAME)

RN 21282-97-3 HCAPLUS

CN Butanoic acid, 3-oxo-, 2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl ester (9CI) (CA INDEX NAME)

RN 30584-69-1 HCAPLUS

CN Benzenemethanol, ar-ethenyl- (9CI) (CA INDEX NAME)

```
D1-СH2-ОН
D1-CH=CH2
     112-90-3, Adogen 172D
     RL: MOA (Modifier or additive use); USES (Uses)
         (crosslinking agent; crosslinkable latexes formed
         by in-situ generation of a crosslinkable isocyanate and amine
         functionality)
RN
     112-90-3 HCAPLUS
     9-Octadecen-1-amine, (9Z)- (9CI) (CA INDEX NAME)
Double bond geometry as shown.
Me^{(CH_2)7} \underbrace{\frac{z}{(CH_2)8}}_{NH_2}
     \textbf{26715-67-3DP}, \ \textbf{Butyl acrylatemethyl methacrylate-methacrylamide}
     copolymer, isocyanate and amine derivs.
     RL: IMF (Industrial manufacture); POF (Polymer in formulation); RCT
      (Reactant); PREP (Preparation); USES (Uses)
         (prepn. and rearrangement of amide pendant groups; crosslinkable latexes formed by in-situ generation of a
         crosslinkable isocyanate and amine functionality)
     26715-67-3 HCAPLUS
RN
     2-Propenoic acid, 2-methyl-, methyl ester, polymer with butyl 2-propenoate and 2-methyl-2-propenamide (9CI) (CA INDEX NAME)
     CM
     CRN 141-32-2
     CMF C7 H12 O2
n-BuO-C-CH=CH2
     CM
          2
     CRN 80-62-6
     CMF C5 H8 O2
 H<sub>2</sub>C O
```

Me-C-C-OMe

CM

3 CRN 79-39-0 CMF C4 H7 N O

$$\begin{array}{c} ^{\text{H}_2\text{C}} \circ \\ \parallel & \parallel \\ \text{Me-C-C-NH}_2 \end{array}$$

```
=> d bib abs hitstr 2
L20 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2001 ACS
     1989:58192 HCAPLUS
DN
     110:58192
     Polymerization of vinylimidazole in bulk and in solution
ΤI
ΑU
     Chapiro, A.; Mankowski, Z.
CS
     CNRS, Thiais, 94320, Fr.
     Eur. Polym. J. (1988), 24(11), 1019-28
     CODEN: EUPJAG; ISSN: 0014-3057
DT
     Journal
LA
     French
AΒ
     The polymn. of vinylimidazole was investigated in bulk and in
     various solvents. The reaction was initiated by gamma radiation and, in some cases, by AIBN. In all systems the polymn. was auto-catalytic. In the bulk and in all concd. systems, the polymer pptd.
      as a crosslinked gel. In more dil. solns., in water or in MeOH,
      the reaction proceeded homogeneously and the resulting polymers were sol.
     in the usual solvents. Crosslinked gels also arose at all
     concns. in benzene or PhMe solns. in which the polymer pptd. as it formed. In CCl4 polymn. also occurred under pptg. conditions but the resulting
     polymers were sol. and their mol. wts. were small because of an important
     chain transfer.
     29383-23-1, Vinylimidazole
     RL: RCT (Reactant)
         (polymn. of, kinetics of, in bulk and in soln.)
RN
     29383-23-1 HCAPLUS
     1H-Imidazole, ethenyl- (9CI) (CA INDEX NAME)
D1-CH=CH2
     25232-42-2P, Poly(vinylimidazole)
     RL: SPN (Synthetic preparation); PREP (Preparation)
     (prepn. of, by polymn. in bulk and in soln.) 25232-42-2 HCAPLUS
RN
     1H-Imidazole, 1-ethenyl-, homopolymer (9CI) (CA INDEX NAME)
     CM
     CRN 1072-63-5
     CMF C5 H6 N2
```

CH==CH2

```
=> d bib abs hitstr 3
L20 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2001 ACS
AN
     1976:17770 HCAPLUS
     84:17770
DN
     N, N'-Divinylureas. Polymerization studies and spectroscopic investigation
ΤI
      of structure
AU
     Corfield, G. C.; Crawshaw, A.; Monks, H. H.
     Dep. Chem. Biol., Sheffield Polytech., Sheffield, Engl. J. Macromol. Sci., Chem. (1975), A9(7), 1085-111
SO
     CODEN: JMCHBD
DТ
      Journal
LA
     English
GΙ
      For diagram(s), see printed CA Issue.
     Homopolymn. of 1, 3-divinyl-2-imidazolidone (I, R, = vinyl) [
     13811-50-2] and of 1, 3-divnylhexahydro-2-pyrimidinone (II) [
     28084-37-9) gave crosslinked, insoluble polymers, while that of 1-ethyl-3-vinyl-2-imidazolidone (I, R = Et) [57490-45-6
     ] gave a soluble, linear polymer. 1,3-Diphenyl-1,3-divinylurea [ 28084-38-0] and 1,3-dimethyl-1,3-divinylurea [57491-89-1] did not polymerize. Spectral evidence indicated conjugation of the
      electron pairs on the nitrogen atom with the .pi.-electrons of the vinyl
      and carbonyl double bonds in all the divinylureas, with such conjugation
      favoring intermol. propagation rather than cyclopolymn. The lack of
     polymn. of the diphenyldivinylurea was attributed to the formation of
      resonance-stabilized free radicals, while that of the
     dimethyldivinylurea was attributed to steric hindrance. Both these
     compds. hydrolyzed rapidly in aq. soln. to give acetaldehyde and the
     corresponding urea.
     57491-91-5 RL: RCT (Reactant)
ΙT
         (Hofmann degrdn. of)
RN
      57491-91-5 HCAPLUS
     1-Imidazolidineethanaminium, 3-ethyl-N,N,N-trimethyl-2-oxo-, iodide (9CI)
      (CA INDEX NAME)
 Et
      CH_2-CH_2-N+Me_3
        • I-
IT
     13811-50-2 28084-37-9 28084-38-0
     RL: RCT (Reactant)
         (hydrolysis of)
RN
     13811-50-2 HCAPLUS
     2-Imidazolidinone, 1,3-diethenyl- (9CI) (CA INDEX NAME)
  CH=CH2
      CH = CH_2
```

28084-37-9 HCAPLUS

CN 2(1H)-Pyrimidinone, 1,3-diethenyltetrahydro- (9CI) (CA INDEX NAME)

$$CH = CH_2$$
 $N$ 
 $O$ 
 $CH = CH_2$ 

RN 28084-38-0 HCAPLUS CN Urea, N,N'-diethenyl-N,N'-diphenyl- (9CI) (CA INDEX NAME)

102-07-8 632-22-4 30826-85-8

RL: PRP (Properties) (ir spectrum of)

102-07-8 HCAPLUS

Urea, N, N'-diphenyl- (9CI) (CA INDEX NAME)

632-22-4 HCAPLUS RN

Urea, tetramethyl- (8CI, 9CI) (CA INDEX NAME)

30826-85-8 HCAPLUS RN

2(1H)-Pyrimidinone, 1,3-diethyltetrahydro- (8CI, 9CI) (CA INDEX NAME)

ΙT 57491-90-4P

RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. and Cope elimination of) 57491-90-4 HCAPLUS

RN

Urea, N,N'-bis[2-(dimethylamino)ethyl]-N,N'-dimethyl- (9CI) (CA INDEX NAME)

IT

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)

(prepn. and reaction of, with methyl iodide) 57491-92-6 HCAPLUS

RN

2-Imidazolidinone, 1-[2-(dimethylamino)ethyl]-3-ethyl- (9CI) (CA INDEX CN NAME)

Et: CH2-CH2-NMe2

57490-45-6P 57491-89-1P 57491-93-7P IT

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (prepn. and spectra of) 57490-45-6 HCAPLUS

RN

2-Imidazolidinone, 1-ethenyl-3-ethyl- (9CI) (CA INDEX NAME)

57491-89-1 HCAPLUS RN

Urea, N, N'-diethenyl-N, N'-dimethyl- (9CI) (CA INDEX NAME)

57491-93-7 HCAPLUS RN

CN Ethanaminium, 2,2'-[carbonylbis(methylimino)]bis[N,N,N-trimethyl-, diiodide (9CI) (CA INDEX NAME)

• I-

IT29631-89-8P 29631-90-1P 57490-46-7P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (prepn. and structure of)
29631-89-8 HCAPLUS

RN

CN 2-Imidazolidinone, 1,3-diethenyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 13811-50-2 CMF C7 H10 N2 O

```
сн== сн2
      сн=== сн2
     29631-90-1 HCAPLUS
RN
     2(1H)-Pyrimidinone, 1,3-diethenyltetrahydro-, homopolymer (9CI) (CA INDEX
CN
     NAME)
     CM
     CRN 28084-37-9
CMF C8 H12 N2 O
  CH == CH_2
     57490-46-7 HCAPLUS
RN
CN
     2-Imidazolidinone, 1-ethenyl-3-ethyl-, homopolymer (9CI) (CA INDEX NAME)
     CRN 57490-45-6
CMF C7 H12 N2 O
 Εt
      CH==CH2
     120-93-4
RL: RCT (Reactant)
     (reaction of, with anhydrides and chlorides) 120-93-4 HCAPLUS
RN
CN
     2-Imidazolidinone (8CI, 9CI) (CA INDEX NAME)
IT
     96-31-1 872-69-5
     RL: RCT (Reactant)
     (reaction of, with dimethyl(chloroethyl)amine) 96-31-1 HCAPLUS
RN
     Urea, N,N'-dimethyl- (9CI) (CA INDEX NAME)
CN
```

```
MeNH-C--NHMe
     872-69-5 HCAPLUS
RN
    2-Imidazolidinone, 1-ethyl- (7CI, 8CI, 9CI) (CA INDEX NAME)
CN
ΙT
     1852-17-1
     RL: RCT (Reactant)
     (reaction of, with ethyl iodide)
1852-17-1 HCAPLUS
RN
     2(1H)-Pyrimidinone, tetrahydro- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)
CN
IT
     75-03-6 75-36-5 100-44-7 108-24-7
     RL: RCT (Reactant)
        (reaction of, with imidazolidone)
     75-03-6 HCAPLUS
     Ethane, iodo- (8CI, 9CI) (CA INDEX NAME)
_{\rm H_3C^-\,CH_2^-\,I}
   75-36-5 HCAPLUS
Acetyl chloride (8CI, 9CI) (CA INDEX NAME)
RN
CN
    0
    100-44-7 HCAPLUS
    Benzene, (chloromethyl) - (9CI) (CA INDEX NAME)
Ph-CH_2-Cl
     108-24-7 HCAPLUS
RN
     Acetic acid, anhydride (9CI) (CA INDEX NAME)
Ac- 0- Ac
     107-99-3
     RL: RCT (Reactant)
     (reaction of, with ureas) 107-99-3 HCAPLUS
RN
     Ethanamine, 2-chloro-N, N-dimethyl- (9CI) (CA INDEX NAME)
```

 ${\tt Me_2N-CH_2-CH_2Cl}$ 

728-24-5 5391-39-9 5391-40-2 40424-21-3 40721-12-8 41731-11-7

RL: PRP (Properties) (uv spectrum of) 728-24-5 HCAPLUS

RN

2-Imidazolidinone, 1,3-diphenyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME) CN

RN 5391-39-9 HCAPLUS CN 2-Imidazolidinone, 1-acetyl- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME)

RN 5391-40-2 HCAPLUS CN 2-Imidazolidinone, 1,3-diacetyl- (7CI, 8CI, 9CI) (CA INDEX NAME)

RN 40424-21-3 HCAPLUS CN 2-Imidazolidinone. 1

2-Imidazolidinone, 1,3-diethyl- (9CI) (CA INDEX NAME) CN

RN 40721-12-8 HCAPLUS

CN 2-Imidazolidinone, 1,3-bis(phenylmethyl) - (9CI) (CA INDEX NAME)

RN 41731-11-7 HCAPLUS CN 1-Imidazolidinecarboxaldehyde, 2-oxo- (9CI) (CA INDEX NAME)

**64-18-6**, reactions **64-19-7**, reactions RL: RCT (Reactant)  ${\tt IT}$ 

(with imidazolidone) 64-18-6 HCAPLUS

RN

Formic acid (7CI, 8CI, 9CI) (CA INDEX NAME) CN

О== СН- ОН

RN 64-19-7 HCAPLUS CN Acetic acid (7CI, 8CI, 9CI) (CA INDEX NAME)

Text

## LAMM 09/771,595

```
=> d bib abs hitstr 1
L10 ANSWER 1 OF 9 HCAPLUS COPYRIGHT 2001 ACS
      2001:614066 HCAPLUS
      Cosmetic and dermatological sunscreen preparations containing
      copolymers and inorganic UV filters
Hoessel, Peter; Wuensch, Thomas; Dieing, Reinhold
IN
      Basf A.-G., Germany
PA
      Ger. Offen., 18 pp.
SO
      CODEN: GWXXBX
DT
      Patent
LA
      German
FAN.CNT 1
                                                    APPLICATION NO. DATE
      PATENT NO.
                          KIND DATE
     DE 10007486 A1 20010823 DE 2000-10007486 20000218 The invention concerns sumscreen formulations that contain inorg.
PΙ
AB
      particles and copolymers that enhance the dispersion of the
      particles and improve the consistency of the prepn. Copolymers
      are prepd. by radical soln. polymn. of the monomers (a) N-
      vinylimidazole or diallylamine derivs. partially or
fully quaternized; (b) neutral or basic water sol. monomer that is
      different from (a); (c) unsatd. acid or anhydride; (d) monomer capable of
      radical polymn. other than (a), (b), (c); (e) crosslinker. Polymn. is
     followed by protonation or quaternization in case the monomers were not or only partially quaternized. Inorg. sunscreens are titanium dioxide, zinc oxide, silica, alumina, zirconium oxide, manganese oxide, or iron oxide;
      the pigments are coated with siloxanes. Skin and hair sunscreens are
      formulated using the ingredients. Thus a copolymer was prepd. from N-vinylpyrrolidone, 3-methyl-1-vinylimidazolium
      methylsulfate and triallylamine under nitrogen atm. with 2,2'-azobis(2-amidinopropane)dihydrochloride. The copolymer was
      used as a 0.5 wt./wt.% component in a sunscreen cream; further ingredients
      were (wt./wt.%): Ceteareth-6 and stearyl alc. 1.0; Ceteareth-25 2.0;
      glyceryl stearate 3.0; cetearyl alc. 2.0; cetearyl octanoate 2.0; Uvinul
     T150 1.0; Uvinul MC80 5.0; Uvinul MBC 95 3.0; zinc oxide 5.0; iso-Pr myristate 7.0; D-panthenol 0.5; 1,2-propylene glycol 5.0; xanthan gum (2%)
      in water) 15; tocopherol acetate 1.0; preservative q.s.; water ad 100.
      1314-13-2, Zinc oxide 1314-23-4, Zirconium oxide
      1332-37-2, Iron oxide 1344-28-1, Alumina
      7631-86-9, Silica 11129-60-5, Manganese oxide
      13463-67-7, Titanium dioxide
      RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
         (cosmetic and dermatol. sunscreen prepns. contg. copolymers
         and inorg. UV filters)
RN
      1314-13-2 HCAPLUS
      Zinc oxide (ZnO) (9CI) (CA INDEX NAME)
o == zn
     1314-23-4 HCAPLUS
   Zirconium oxide (ZrO2) (8CI, 9CI) (CA INDEX NAME)
o = zr = o
     1332-37-2 HCAPLUS
RN
    Iron oxide (8CI, 9CI) (CA INDEX NAME)
CN
*** STRUCTURE DIAGRAM. IS NOT AVAILABLE ***
ŔŊ
    1344-28-1 HCAPLUS
     Aluminum oxide (Al2O3) (8CI, 9CI) (CA INDEX NAME)
CN
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
RN
     7631-86-9 HCAPLUS
      Silica (7CI, 8CI, 9CI) (CA INDEX NAME)
```

o== si== o 11129-60-5 HCAPLUS RN CN Manganese oxide (9CI) (CA INDEX NAME) \*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\* RN 13463-67-7 HCAPLUS Titanium oxide (TiO2) (8CI, 9CI) (CA INDEX NAME) CN O== Ti== O 219805-93-3P 219805-95-5P 219805-96-6P 219805-98-8P 219805-99-9P RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); USES (Uses) (cosmetic and dermatol. sunscreen preprise contg. copolymers and inorg. UV filters)

219805-93-3 HCAPLUS RN CN INDEX NAME) CM 1 CRN 13811-50-2 CMF C7 H10 N2 O  $CH = CH_2$ сн== сн2 CM 2 CRN 7398-69-8 CMF C8 H16 N . C1

• cl-

Me

- cн<sub>2</sub>- сн== сн<sub>2</sub>

CM 3

 $H_2C = CH - CH_2 - N^{+}$ 

\_\_\_\_\_.

CRN 88-12-0 CMF C6 H9 N O

RN 219805-95-5 HCAPLUS
CN 1H-Imidazolium, 1-ethenyl-3-methyl-, methyl sulfate, polymer with 1,3-diethenyl-2-imidazolidinone and 1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)

СМ

CRN 13811-50-2 CMF C7 H10 N2 O

$$CH = CH_2$$
 $N$ 
 $O$ 
 $CH = CH_2$ 

CM 2

CRN 88-12-0 CMF C6 H9 N O

CM 3

CRN 26591-72-0 CMF C6 H9 N2 . C H3 O4 S

CM 4

CRN 45534-45-0 CMF C6 H9 N2

$$\begin{array}{c} \text{Me} \\ | \\ \text{N} \\ \\ \text{CH} = \text{CH}_2 \end{array}$$

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 5

CRN 21228-90-0

CMF C H3 O4 S

Me-0-803-

RN 219805-96-6 HCAPLUS
CN 1H-Imidazolium, 1-ethenyl-2,3-dimethyl-, methyl sulfate, polymer with 1,3-diethenyl-2-imidazolidinone and 1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)

CM 1

CRN 13811-50-2 CMF C7 H10 N2 O

CM 2

CRN 88-12-0 CMF C6 H9 N O

C14 -

CRN 38862-40-7 CMF C7 H11 N2 . C H3 O4 S

CM 4

CRN 45657-58-7 CMF C7 H11 N2

$$\begin{array}{c} \text{Me} \\ \\ \\ \text{N} \\ \\ \text{CH} = \text{CH}_2 \end{array}$$

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 5

CRN 21228-90-0 CMF C H3 O4 S Me-0-803-

RN 219805-98-8 HCAPLUS
CN 1H-Imidazolium, 1-ethenyl-3-methyl-, methyl sulfate, polymer with 1-ethenyl-2-pyrrolidinone and oxybis(2,1-ethanediyloxy-2,1-ethanediyl) di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 17831-71-9 CMF C14 H22 O7

PAGE 1-B

— cн== cн<sub>2</sub>

CM 2

CRN 88-12-0 CMF C6 H9 N O

CM 3

CRN 26591-72-0 CMF C6 H9 N2 . C H3 O4 S

CM 4

CRN 45534-45-0 CMF C6 H9 N2

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 5

CRN 21228-90-0 CMF C H3 O4 S

Me-0-803-

RN 219805-99-9 HCAPLUS
CN 1H-Imidazolium, 1-ethenyl-3-methyl-, methyl sulfate, polymer with
N,N-di-2-propenyl-2-propen-1-amine and 1-ethenyl-2-pyrrolidinone (9CI)
(CA INDEX NAME)

CM 1

CRN 102-70-5 CMF C9 H15 N

CM 2

CRN 88-12-0 CMF C6 H9 N O

CM 3

CRN 26591-72-0 CMF C6 H9 N2 . C H3 O4 S

CM 4

CRN 45534-45-0 CMF C6 H9 N2

$$\begin{array}{c} \text{Me} \\ \\ \\ \\ \text{N} \\ \\ \text{CH} = \text{CH}_2 \\ \end{array}$$

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 5

CRN 21228-90-0 CMF C H3 O4 S

Me-O-SO3-

## ●2 HC1

IT 124-02-7, Diallylamine 1072-63-5, N Vinylimidazole
 RL: RCT (Reactant)
 (cosmetic and dermatol. sunscreen prepns. contg. copolymers
 and inorg. UV filters)
RN 124-02-7 HCAPLUS
CN 2-Propen-1-amine, N-2-propenyl- (9CI) (CA INDEX NAME)

$$H_2C = CH - CH_2 - NH - CH_2 - CH = CH_2$$

RN 1072-63-5 HCAPLUS CN 1H-Imidazole, 1-ethenyl- (9CI) (CA INDEX NAME)

$$N$$
 $N$ 
 $CH = CH_2$ 

```
L10 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2001 ACS
      2001:10589 HCAPLUS
DN
      134:76136
      Preparation and use of cross-linked cationic polymers in skin cosmetic
ΤI
      compositions and in dermatological compositions
IN
      Hossel, Peter; Tiefensee, Kristin; Sanner, Axel; Dienig,
      Reinhold; Gotsche, Michael; Zeitz, Katrin
     Basf A.-G., Germany
Eur. Pat. Appl., 21 pp.
PΑ
SO
      CODEN: EPXXDW
DT
      Patent
LA
      German
FAN.CNT 1
                       KIND DATE
      PATENT NO.
                                                  APPLICATION NO. DATE
      -----
      EP 1064924 A2 20010103
EP 1064924 A3 20010117
ΡI
                                 20010103
                                                   EP 2000-113725 20000628
          1004924 A3 20010117
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO
19929758 A1 20010104 DE 1999-19929758 19990629
2001055321 A2 20010227 JP 2000-191019 20000626
2000002906 A 20010130 BR 2000-2906 20000628
2000002906 A 20010130 BR 2000-2906 20000628
      DE 19929758
      JP 2001055321
      BR 2000002906
CN 1282571 A
PRAI DE 1999-19929758 A
                                 20010207
                                                   CN 2000-118459
                                                                      20000629
                                19990629
     The invention concerns the prepn. of cross-linked cationic polymers by
      radical polymn. from N-vinylimidazole derivs.,
      diallylamine derivs., neutral or basic watersol. monomers, unsatd.
      acid or anhydride, and a crosslinker contg. two non-conjugated double
      bonds; followed by protonation and/or quaternation of the partially
      quaternized monomers and using the product in dermatol. compns. Thus
      triallylamine-N-vinylpyrrolidone-3-methyl-1-vinylimidazole
      copolymer was prepd. and used in a W/O skin cream prepn. with the
     following wt./wt.% compn. : copolymer 0.5; Cremophor A6 2.0; Cremophor A 25 2.0; Lanette O 2.0; Inwitor 960 3.0; paraffin oil 5.0;
      jojoba oil 4.0; Luvitol EHO 3.0; Abil 350 1.0; Amerchol L 101 3.0; Veegum
      Ultra 0.5; 1,2-propylene glycol 5.0; imidazolidinyl urea 0.3;
      phenoxyethanol 0.5; D-panthenol 1.0; water ad 100.
      57-55-6, 1,2-Propylene glycol, biological studies 81-13-0, D-Panthenol 122-99-6, Ethanol, 2-phenoxy- 8029-05-8,
      Amerchol L 101 31566-31-1, Imwitor 960 39236-46-9,
      Imidazolidinyl urea 42557-10-8, Abil 350 85941-44-2,
      Cremophor A6 129651-72-5, Luvitol EHO
      RL: BSU (Biological study, unclassified); BIOL (Biological study)
          (prepn. and use of cross-linked cationic polymers in skin cosmetic
         compns. and in dermatol. compns.)
RN
      57-55-6 HCAPLUS
      1,2-Propanediol (8CI, 9CI) (CA INDEX NAME)
     ОН
н<sub>3</sub>с-сн-сн<sub>2</sub>-он
RN
      81-13-0 HCAPLUS
      Butanamide, 2,4-dihydroxy-N-(3-hydroxypropyl)-3,3-dimethyl-, (2R)- (9CI)
      (CA INDEX NAME)
Absolute stereochemistry.
       H N (CH<sub>2</sub>) 3 OH
```

=> d bib abs hitstr 2

RN122-99-6 HCAPLUS

Ethanol, 2-phenoxy- (6CI, 7CI, 8CI, 9CI) (CA INDEX NAME) CN

 ${\tt PhO-CH_2-CH_2-OH}$ 

8029-05-8 HCAPLUS RN

Amerchol L 101 (8CI, 9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 31566-31-1 HCAPLUS

Octadecanoic acid, monoester with 1,2,3-propanetriol (9CI) (CA INDEX CN

CM 1

CRN 57-11-4 CMF C18 H36 O2

 $HO_2C^-$  (CH<sub>2</sub>)<sub>16</sub>-Me

CM 2

CRN 56-81-5

CMF C3 H8 O3

$$\begin{array}{c} \text{OH} \\ | \\ \text{HO-} \, \text{CH}_2\text{--} \, \text{CH-} \, \text{CH}_2\text{--} \, \text{OH} \end{array}$$

RN

 $39236-46-9 \quad \text{HCAPLUS} \\ \text{Urea, N,N''-methylenebis[N'-{3-(hydroxymethyl)-2,5-dioxo-4-imidazolidinyl]-}}$ CN (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} CH_2-OH & CH_2-OH \\ \hline \\ N & O \\ \hline \\ N & NH-C-NH-CH_2-NH-C-NH \\ \hline \\ N & N \\ \hline \end{array}$$

RN 42557-10-8 HCAPLUS

Poly[oxy(dimethylsilylene)], .alpha.-(trimethylsilyl)-.omega.[(trimethylsilyl)oxy]- (9CI) (CA INDEX NAME) CN

85941-44-2 HCAPLUS RN

Cremophor A 6 (9CI) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN

129651-72-5 HCAPLUS Luvitol EHO (9CI) (CA INDEX NAME) CN

```
219805-93-3P 219805-94-4P 315667-03-9P
ΙT
      315667-05-1P 315667-06-2P 315667-07-3P
      315667-08-4P
      RL: BSU (Biological study, unclassified); SPN (Synthetic preparation);
     BIOL (Biological study); PREP (Preparation)
         (prepn. and use of cross-linked cationic polymers in skin cosmetic
         compns. and in dermatol. compns.)
     219805-93-3 HCAPLUS
     2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, polymer with
      1,3-diethenyl-2-imidazolidinone and 1-ethenyl-2-pyrrolidinone (9CI) (CA
     INDEX NAME)
     CM
     CRN 13811-50-2
CMF C7 H10 N2 O
  сн== сн2
      СН=== СН2
     CM
           2
     CRN 7398-69-8
     CMF C8 H16 N . Cl
               Ме
H_2C = CH - CH_2 - N^2
                   - CH<sub>2</sub> - CH== CH<sub>2</sub>
               Me
              • c1-
     CM
           3
     CRN 88-12-0
CMF C6 H9 N O
  сн = сн2
     219805-94-4 HCAPLUS
RN
     1H-Imidazolium, 1-ethenyl-3-methyl-, chloride, polymer with 1,3-diethenyl-2-imidazolidinone and 1-ethenyl-2-pyrrolidinone (9CI) (CA
     INDEX NAME)
     CM
          1
     CRN 13811-50-2
CMF C7 H10 N2 O
```

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

CRN 88-12-0 CMF C6 H9 N O

----

CM3

CRN 264255-37-0 CMF C6 H9 N2 . C H3 O3 S

> CM 4

CRN 45534-45-0 CMF C6 H9 N2

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM

CRN 16053-58-0 CMF C H3 O3 S

315667-05-1 HCAPLUS
1H-Imidazolium, 1-ethenyl-2,3-dimethyl-, methanesulfonate, polymer with
1,3-diethenyl-2-imidazolidinone and 1-ethenyl-2-pyrrolidinone (9CI) (CA
INDEX NAME)

CM 1

CRN 13811-50-2 CMF C7 H10 N2 O

CM 2

CRN 88-12-0

CMF C6 H9 N O

3 CM

CRN 315667-04-0 CMF C7 H11 N2 . C H3 O3 S

CM

CRN 45657-58-7 CMF C7 H11 N2

$$\begin{tabular}{lll} Me & & & \\ & & & Me & \\ & & & N & \\ & & & CH = CH_2 \\ \end{tabular}$$

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM

CRN 16053-58-0 CMF C H3 O3 S

RN 315667-06-2 HCAPLUS

1H-Imidazolium, 1-ethenyl-3-methyl-, methanesulfonate, polymer with 1-ethenyl-2-pyrrolidinone and (1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] di-2-propenoate (9CI) (CA INDEX NAME)

CM

CRN 42978-66-5 CMF C15 H24 O6 CCI IDS

CDES \*

$$\begin{array}{c} {\rm O} \\ \parallel \\ {\rm H_2C} = {\rm CH_2-C-O-CH_2-CH_2-O-CH_2-CH_2-CH_2-O-C-CH} \end{array}$$

3 ( D1-Me )

CRN 88-12-0 CMF C6 H9 N O

CM 3

CRN 264255-37-0 CMF C6 H9 N2 . C H3 O3 S

CM 4

CRN 45534-45-0 CMF C6 H9 N2

$$\stackrel{\text{Me}}{\underset{N}{|}}$$

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 5

CRN 16053-58-0 CMF C H3 O3 S

RN 315667-07-3 HCAPLUS

CN 1H-Imidazolium, 1-ethenyl-3-methyl-, methanesulfonate, polymer with 1-ethenyl-2-pyrrolidinone and oxybis(2,1-ethanediyloxy-2,1-ethanediyl) di-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 17831-71-9 CMF C14 H22 O7

PAGE 1-B

- CH= CH $_2$ 

CM 2

CRN 88-12-0 CMF C6 H9 N O

CM

CRN 264255-37-0 CMF C6 H9 N2 . C H3 O3 S

CRN 45534-45-0 CMF C6 H9 N2

Me N 
$$\sim$$
 CH $=$  CH $_2$ 

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 5

CRN 16053-58-0 CMF C H3 O3 S

315667-08-4 HCAPLUS

2-Propenoic acid, polymer with N,N-di-2-propenyl-2-propen-1-amine and 1-ethenyl-1H-imidazole (9CI) (CA INDEX NAME)

CM

CRN 1072-63-5 CMF C5 H6 N2

●2 HCl

RN

88-12-0, reactions 102-70-5, Triallylamine 124-02-7D, Diallylamine, deriv. 1072-63-5D, N-Vinylimidazole, deriv. 26591-72-0, 3-Methyl-1-

2-Pyrrolidinone, 1-ethenyl- (9CI) (CA INDEX NAME)

vinylimidazoliummethylsulfate

RL: RCT (Reactant)

88-12-0 HCAPLUS

(prepn. and use of cross-linked cationic polymers in skin cosmetic compns. and in dermatol. compns.)

102-70-5 HCAPLUS RN

CN 2-Propen-1-amine, N, N-di-2-propenyl- (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{CH}_2\text{--}\text{CH} \longrightarrow \text{CH}_2 \\ | \\ \text{H}_2\text{C} \longrightarrow \text{CH} - \text{CH}_2 - \text{N} - \text{CH}_2 - \text{CH} \longrightarrow \text{CH}_2 \end{array}$$

124-02-7 HCAPLUS RN

2-Propen-1-amine, N-2-propenyl- (9CI) (CA INDEX NAME) CN

$$H_2C = CH - CH_2 - NH - CH_2 - CH = CH_2$$

RN 1072-63-5 HCAPLUS CN 1H-Imidazole, 1-ethenyl- (9CI) (CA INDEX NAME)

RN 26591-72-0 HCAPLUS

1H-Imidazolium, 1-ethenyl-3-methyl-, methyl sulfate (9CI) (CA INDEX NAME) CN

CRN 45534-45-0 CMF C6 H9 N2

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM

CRN 21228-90-0 CMF C H3 O4 S

Me-0-503-

=> d bib abs hitstr 3 L10 ANSWER 3 OF 9 HCAPLUS COPYRIGHT 2001 ACS 2000:263637 HCAPLUS DN 133:325435 Conditioning polymers in today's shampoo formulations - efficacy, TΙ mechanism and test methods ΑIJ Hossel, P.; Dieing, R.; Norenberg, R.; Pfau, A.; Sander, R. BASF Aktiengesellschaft, Ludwigshafen, Germany Int. J. Cosmet. Sci. (2000), 22(1), 1-10 CS SO CODEN: IJCMDW; ISSN: 0142-5463 РΒ Blackwell Science Ltd. DTJournal LA English Today's shampoo formulations are beyond the stage of pure cleansing of the AB hair. Addnl. benefits are expected, e.g. conditioning, smoothing of the hair surface, improvement of combability and lather creaminess. Cationic polymers play an important role in providing many of those features. Therefore, within the last few years their use in shampoos has increased greatly. In the only last 2 decades, shampoo designation has gradually changed from "2-in-1" to "3-in-1" and then to "multifunctional", as at present. The consumer demands products which live up to their promises. Modern shampoos contain a wide variety of ingredients such as co-surfactants, vitamins and pro-vitamins, protein derivs., silicones, natural-based plant exts. and other "active ingredients", but there is still a need for conditioning polymers. The specific objective of this study is to assess the conditioning efficacy of cationic polymers and to investigate their mechanisms in a shampoo system. The investigations were carried out on formulations that contained sodium lauryl ether sulfate and different cationic polymers, e.g., Polyquaternium 7, 10, 11, cationic guar gum and Luviquat Care (Polyquaternium 44), a new branched copolymer of vinylpyrrolidone and quaternized vinylimidazolium salts. We used test methods relevant to the applications in question, such as combing force measurements, the feel of the hair and the creaminess of the lather, to assess the efficacy. At. force microscopy and electrokinetics (streaming potential) were used to detect polymer residues on treated hair. All the polymers under investigation improved the overall performance of the shampoo formulations. This was demonstrated by means of combing force measurements, sensorial tests and anal. methods, namely zeta potential measurement and at. force microscopy. Polyquaternium 44 had the best conditioning properties on wet hair without sacrificing removability or absence of build-up. The latter are the most striking weaknesses of cationic Guar gum-based polymers. Polyquaternium 10 can also be removed from the hair after rinsing with anionic surfactant but it does not perform as well as Polyquaternium 44 in the fields of wet combability and sensorial criteria such as lather creaminess and feel of the hair. We postulate that the outstanding properties of Polyquaternium 44 as a conditioning agent for shampoos are due to its tailor-made "branched" structure. There is a clear correlation between the mol. wt. and the efficacy of the new copolymers of VP and QV1. Only cationic polymers with a very high mol. wt. are effective as conditioners in shampoos based on anionic surfactants. Surprisingly, they do not have to have a high cationic charge. On the basis of all our results, our postulation is that the polymer residue which is responsible for conditioning does not form a flat layer on the hair. Rather, the polymer residue adsorbs with the few cationic moieties, while the uncharged part of the polymer forms loops, which are orientated away from the hair and

which are responsible for the reduced friction between hairs.

9004-82-4, Sodium lauryl ether sulfate 26590-05-6,
Polyquaternium 7 53633-54-8, Polyquaternium 11
65497-29-2, Guar hydroxypropyltrimonium chloride
81859-24-7, Polyquaternium 10 150599-70-5,
Polyquaternium 44
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES

(Uses)

(conditioning polymers in shampoo formulations) 9004-82-4 HCAPLUS

Poly(oxy-1,2-ethanediyl), .alpha.-sulfo-.omega.-(dodecyloxy)-, sodium salt (9CI) (CA INDEX NAME)

Na

26590-05-6 HCAPLUS

 $\hbox{2-Propen-1-aminium, $N$, $N$-dimethyl-$N$-2-propenyl-, chloride, polymer with}\\$ 2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 7398-69-8 CMF C8 H16 N . C1

$$H_2C = CH - CH_2 - N + CH_2 - CH = CH_2$$

Me

Me

Me

Me

Me

Me

Me

Me

Me

● c1-

CM

CRN 79-06-1 CMF C3 H5 N O

RN53633-54-8 HCAPLUS

2-Propenoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester, polymer with 1-ethenyl-2-pyrrolidinone, compd. with diethyl sulfate (9CI) (CA INDEX NAME)

CM 1

CRN 64-67-5 CMF C4 H10 O4 S

CM

CRN 30581-59-0

CMF (C8 H15 N O2 . C6 H9 N O) x CCI PMS

```
CM
                 3
           CRN 2867-47-2
           CMF C8 H15 N O2
                    O CH<sub>2</sub>
Me2N-CH2-CH2-O-C-C-Me
           CM
                 4
           CRN 88-12-0
CMF C6 H9 N O
  CH = CH_2
     ===0
ŔŇ
     65497-29-2 HCAPLUS
     Guar gum, 2-hydroxy-3-(trimethylammonio)propyl ether, chloride (9CI) (CA
     INDEX NAME)
     CM
          1
     CRN 67034-33-7
     CMF C6 H16 N O2 . \times Unspecified
     CDES 8:GD
           CM 2
           CRN 44814-66-6
CMF C6 H16 N O2
         ОН
HO-CH_2-CH-CH_2-N+Me_3
           CM
           CRN 9000-30-0
CMF Unspecified
           CCI PMS, MAN
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
     81859-24-7 HCAPLUS
Cellulose, 2-hydroxyethyl 2-[2-hydroxy-3-(trimethylammonio)propoxy]ethyl
RN
CN
     2-hydroxy-3-(trimethylammonio)propyl ether, chloride (9CI) (CA INDEX
     NAME)
     CM
     CRN 170553-71-6 CMF C8 H20 N O3 . x C6 H16 N O2 . x C2 H6 O2 . x Unspecified
     CDES 8:GD
           CM 2
           CRN 170344-46-4
CMF C8 H20 N O3
```

```
ОН
{\rm Me}_3{}^+{\rm N}-{\rm CH}_2-{\rm CH}_2-{\rm CH}_2{}^-{\rm O}-{\rm CH}_2-{\rm CH}_2{}^-{\rm OH}
               CM 3
              CRN 44814-66-6
CMF C6 H16 N O2
            ОН
HO-CH2-CH-CH2-N+Me3
              CM 4
              CRN 9004-34-6
CMF Unspecified
CCI PMS, MAN
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
               CM 5
              CRN 107-21-1
CMF C2 H6 O2
HO-CH_2-CH_2-OH
     150599-70-5 HCAPLUS
       1H-Imidazolium, 1-ethenyl-3-methyl-, methyl sulfate, polymer with 1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)
       CM 1
       CRN 88-12-0
CMF C6 H9 N O
   CH = CH_2
       CM 2
       CRN 26591-72-0
CMF C6 H9 N2 . C H3 O4 S
               CM 3
              CRN 45534-45-0
CMF C6 H9 N2
```

Me N N CH 
$$=$$
 CH<sub>2</sub>

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM

CRN 21228-90-0 CMF C H3 O4 S

Me- 0- SO3-

RE.CNT 10

- (1) Fairbrother, F; J Chem Soc 1924, V125, P2319
  (2) Goddard, E; Cosmet Toilet 1954, V109, P55
  (5) Lochhead, R; Cosmet Toilet 1988, V103, P23 HCAPLUS
  (7) O'Connor, S; J Invest Dermat 1995, V105, P96 MEDLINE
  (9) Ribitsch, V; Streaming potential measurements of films and fibers 1991, P354 HCAPLUS

ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
=> d bib abs hitstr 4
L10 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2001 ACS
     2000:65519 HCAPLUS
DN
     132:123063
     Manufacture of cationically crosslinked polymer powders
TI
IN
     Hildebrandt, Volker; Dieing, Reinhold; Zeitz, Katrin
PΑ
     BASF A.-G., Germany
     Ger. Offen., 8 pp.
     CODEN: GWXXBX
DT
     Patent
LA
     German
FAN.CNT 1
     PATENT NO.
                      KIND DATE
                                            APPLICATION NO. DATE
                      ----
     DE 19833287
                             20000127
PΤ
                       A1
                                            DE 1998-19833287 19980724
     WO 2000005274
                      A1
                             20000203
                                            WO 1999-EP4868 19990712
         W: CA, CN, JP, US
         RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
             PT, SE
                       A1 20010725
                                            EP 1999-932863 19990712
     EP 1117696
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE, FI
PRAI DE 1998-19833287 A
                             19980724
     WO 1999-EP4868
                       W
                           19990712
     The title polymers, useful as additives in pharmaceutical and cosmetic
     formulations, are manufd. by radical polymn. of monoethylenically unsatd.
     monomers contg. quaternized or quaternizable N atoms in supercrit. \rm CO2 at temps. \rm 31\text{--}150.degree. and pressures \rm >73 bar, esp. \rm 120\text{--}250 bar. For
     example, introducing a mixt. of N-methyl-N-vinylimidazolium
     methosulfate, triallylamine and N-vinylpyrrolidone into a stirred reactor
     contg. supercrit. CO2 and stirring the whole for 10 h at 160 bar and
     60.degree. gave the copolymer as a flowable white powder
     comprising particles of 10-500 .mu.m.
     124-38-9, Carbon dioxide, uses
     RL: NUU (Nonbiological use, unclassified); USES (Uses)
        (manuf. of cationically crosslinked polymer powders by radical polymn.
        of monomers in supercrit.)
RN
     124-38-9 HCAPLUS
     Carbon dioxide (8CI, 9CI) (CA INDEX NAME)
o = c = o
     219805-99-9P, N-Methyl-N-vinylimidazolium
     methosulfate-Triallylamine-N-Vinylpyrrolidone copolymer
     256326-18-8P, N,N'-Divinylethyleneurea-N-Methyl-N-
     vinylimidazolium methosulfate-N-Vinylcaprolactam-N-
     Vinylpyrrolidone copolymer
     RL: IMF (Industrial manufacture); PREP (Preparation)
        (manuf. of cationically crosslinked polymer powders by radical polymn.
        of monomers in supercrit. carbon dioxide)
     219805-99-9 HCAPLUS
RN
     1H-Imidazolium, 1-ethenyl-3-methyl-, methyl sulfate, polymer with
     N,N-di-2-propenyl-2-propen-1-amine and 1-ethenyl-2-pyrrolidinone (9CI)
     (CA INDEX NAME)
     CRN 102-70-5
     CMF C9 H15 N
              CH2 - CH=== CH2
H2C = CH- CH2- N- CH2- CH= CH2
```

CM 2

CRN 88-12-0

CMF C6 H9 N O

CM

CRN 26591-72-0 CMF C6 H9 N2 . C H3 O4 S

CM 4

CRN 45534-45-0 CMF C6 H9 N2

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 5

CRN 21228-90-0 CMF C H3 O4 S

Me-0-503-

RN 256326-18-8 HCAPLUS
CN 1H-Imidazolium, 1-ethenyl-3-methyl-, methyl sulfate, polymer with 1,3-diethenyl-2-imidazolidinone, 1-ethenylhexahydro-2H-azepin-2-one and 1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)

CM 1

CRN 13811-50-2 CMF C7 H10 N2 O

$$\begin{array}{c} \text{CH} \longrightarrow \text{CH}_2 \\ \\ \text{N} \\ \text{O} \\ \\ \text{CH} \longrightarrow \text{CH}_2 \\ \end{array}$$

CM 2

CRN 2235-00-9 CMF C8 H13 N O

CM 3

CRN 88-12-0 CMF C6 H9 N O

CM 4

CRN 26591-72-0 CMF C6 H9 N2 . C H3 O4 S

CM 5

CRN 45534-45-0 CMF C6 H9 N2



\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 6

CRN 21228-90-0 CMF C H3 O4 S

Me-0-803-

```
=> d bib abs hitstr 5
L10 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2001 ACS
AN
      1999:561823 HCAPLUS
      131:196515
DN
      Atomic-force microscopy in hair cosmetics
ΤI
     Hossel, Peter: Pfau, Andreas: Sander, Ralf
BASF A.-G., Ludwigshafen, Germany
Parfuem. Kosmet. (1999), 80(7/8), 14-17
AU
CS
      CODEN: PAKOAL; ISSN: 0031-1952
PΒ
      G. Braun Fachverlage
DT
      Journal
LA
      German
      Adsorption and desorption behavior were studied of the branched
      copolymer polyquaternium 44 (0.5%, N-vinylpyrrolidone and vinylimidazoliummethyl sulfate; Luquavit Care) and 14% Na lauryl
      ether sulfate by at. force microscopy (AFM) at exactly the same point on
      the hair by taking measurements before and after the polymer application.
      The polymer formed a network of isolated patches rather than a continuous
      film when it was applied to the hair. AFM of adsorption and desorption of cationic polymers and interactions of cationic polymers with human hair
      are described.
      29297-55-0, Vinylpyrrolidone vinylimidazole
      copolymer 150599-70-5, Polyquaternium 44
      RL: BAC (Biological activity or effector, except adverse); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
          (at.-force microscopy in hair cosmetics)
RN
      29297-55-0 HCAPLUS
      2-Pyrrolidinone, 1-ethenyl-, polymer with 1-ethenyl-1H-imidazole (9CI)
      (CA INDEX NAME)
      CM
           1
      CRN 1072-63-5
      CMF C5 H6 N2
       CH=CH2
      CM
           2
      CRN 88-12-0
      CMF C6 H9 N O
  CH== CH2
      150599-70-5 HCAPLUS
      1H-Imidazolium, 1-ethenyl-3-methyl-, methyl sulfate, polymer with
      1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)
      CM
      CRN 88-12-0
      CMF C6 H9 N O
```

CM

CRN 26591-72-0 CMF C6 H9 N2 . C H3 O4 S

CRN 45534-45-0 CMF C6 H9 N2



\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 4

CRN 21228-90-0 CMF C H3 O4 S

Me- 0- SO3-

RE.CNT 17

RE

- (6) Goddard, E; Cosmetics & Toiletries 1994, V109, P55 HCAPLUS
  (7) Henderson, G; Colloids and Surfaces, A 1994, V87, P197 HCAPLUS
  (10) Magonov, S; Surf Sci 1997, V389, P201 HCAPLUS
  (13) Pfrommer, E; SOFW 1998, V124, P832 HCAPLUS
  (14) Schmitt, R; Cosmetics & Toiletries 1994, V109, P83 HCAPLUS
  ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
=> d bib abs hitstr 6
L10 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2001 ACS
     1999:265961 HCAPLUS
DN
     130:325498
ΤI
     Use of cationic copolymers obtained from unsaturated acids and
     N-\mbox{vinylimidazolium} salts in cosmetic hair preparations
ΙN
     Dieing, Reinhold; Hoessel, Peter; Sanner, Axel
     BASF A.-G., Germany
SO
     Ger. Offen., 8 pp.
     CODEN: GWXXBX
תח
     Patent
LA
     German
FAN.CNT 1
     PATENT NO. KIND DATE
                                           APPLICATION NO. DATE
                            -----
                     ____
                                           -----
    DE 19745637 A1 19990422
EP 911018 A1 19990428
PΙ
                                           DE 1997-19745637 19971016
                                           EP 1998-118850 19981006
        R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO
                      AA 19990416
     CA 2248241
                                           CA 1998-2248241 19981008
     CN 1220275
                       Α
                          19990623
                                           CN 1998-124133
                                                           19981016
PRAI DE 1997-19745637
                            19971016
    Cationic polymers obtained by radical polymn. of a mixt. of
     (un) substituted N-vinylimidazole of specified structure 60-99,
     ethylenically-unsatd. polymerizable acid or salt 1-40 and other monomer
     0-30\% (based on total monomers) and quaternization, are useful for the
     title purpose. For example, methacrylic acid was neutralized in H2O with
     aq. NaOH, combined with 3-methyl-1-vinylimidazolium chloride and
     the mixt. polymd. under N in the presence of 2,2'-azobis(2-aminopropane)-
     HCl to give a title copolymer which was used in a hair shampoo
     formulation.
     223720-51-2P, 3-Methyl-1-vinylimidazolium
     chloride-Sodium methacrylate copolymer 223720-56-7P,
     2-Acrylamido-2-methyl-1-propanesulfonic acid-3-Methyl-1-
     vinylimidazolium chloride-Sodium methacrylate copolymer
     223720-61-4P, 3-Methyl-1-vinylimidazolium methyl
     sulfate-Sodium methacrylate copolymer
     RL: IMF (Industrial manufacture); TEM (Technical or engineered material
     use); PREP (Preparation); USES (Uses)
        (cationic copolymers obtained from unsatd. acids and N-
        vinylimidazolium salts manufd. for use in cosmetic hair
        prepns.)
     223720-51-2 HCAPLUS
RN
     1H-Imidazolium, 1-ethenyl-3-methyl-, chloride, polymer with sodium
     2-methyl-2-propenoate (9CI) (CA INDEX NAME)
     CM
    CRN 13474-25-4
CMF C6 H9 N2 . C1
      сн == сн2
   ● c1-
```

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 2

CRN 5536-61-8 CMF C4 H6 O2 . Na

Na

RN 223720-56-7 HCAPLUS
CN 1H-Imidazolium, 1-ethenyl-3-methyl-, chloride, polymer with 2-methyl-2-[(1-oxo-2-propenyl)amino]-1-propanesulfonic acid and sodium 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 15214-89-8 CMF C7 H13 N O4 S

$$\begin{array}{c} & \text{O} \\ & \text{NH-C-CH} \\ \text{CH}_2 \\ \text{Me-C-CH}_2 \\ \text{SO}_3 \text{H} \\ & \text{Me} \end{array}$$

CM 2

CRN 13474-25-4 CMF C6 H9 N2 . C1

• c1-

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 3

CRN 5536-61-8 CMF C4 H6 O2 . Na

● Na

RN 223720-61-4 HCAPLUS
CN 1H-Imidazolium, 1-ethenyl-3-methyl-, methyl sulfate, polymer with sodium 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM :

CRN 5536-61-8 CMF C4 H6 O2 . Na

СH<sub>2</sub> || ме-С-сО<sub>2</sub>н

● №а

CM 2

CRN 26591-72-0 CMF C6 H9 N2 . C H3 O4 S

CM 3

CRN 45534-45-0 CMF C6 H9 N2



\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 4

CRN 21228-90-0 CMF C H3 O4 S

Me-0-S03-

```
=> d bib abs hitstr 7
L10 ANSWER 7 OF 9 HCAPLUS COPYRIGHT 2001 ACS
     1999:90374 HCAPLUS
ΑN
DN
     130:129757
     Cationic copolymers of high molecular weight for use in hair
TΙ
     conditioners
ΙN
     Dieing, Reinhold; Hoessel, Peter; Kothrade, Stephan; Sanner,
     Axel; Zeitz, Katrin; Raubenheimer, Hans-Juergen; Schehlmann, Volker
PΑ
     BASF Aktiengesellschaft, Germany
     Eur. Pat. Appl., 12 pp.
SO
     CODEN: EPXXDW
DT
     Patent
LA
     German
FAN.CNT 1
     PATENT NO.
                 KIND DATE
                                             APPLICATION NO. DATE
     -----
     EP 893117 A2 19990127
EP 893117 A3 20000112
PΙ
                                             EP 1998-112651 19980708
         R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO
                     A1 19990128
A2 19990323
     DE 19731764
                                             DE 1997-19731764 19970724
     JP 11079957
                                             JP 1998-206335 19980722
                                             CN 1998-117533
     CN 1209991
                       A 19990310
                                                               19980724
PRAI DE 1997-19731764
                             19970724
     Radical-initiated copolymn. of (a) a cationic or quaternizable monomer
     1-99.99, (b) a water-sol. monomer 0-98.99, (c) an addnl.
     radical-polymerizable monomer 0-50, and a bi- or polyfunctional
     radical-polymerizable monomer 0.01-10 wt.%, followed [in case (a) is not quaternized] by quaternization, results in formation of crosslinked
     polymers which, when added to shampoos, show excellent conditioning
     properties without a build-up effect. Thus, aq. solns. of 3-methyl-1-
     vinylimidazolium chloride, N-vinylpyrrolidone,
     N, N'-divinylethyleneurea, and 2,2'-azobis(2-amidinopropane)-2HCl
     (initiator) were slowly combined at 60.degree. under N2 to produce a
     colorless, highly viscous polymer soln. After use of a shampoo contg.
     this polymer 0.1, Na lauryl ether sulfate 10.0, coco amidopropylbetaine
     4.0, and water to 100%, the hair showed very good foaming properties and a
     decrease in wet combing force of 47% compared to a control shampoo.
     1072-63-5DP, N-Vinylimidazole, derivs., polymers 87865-40-5P 219805-93-3P 219805-94-4P
     219805-95-5P 219805-96-6P 219805-97-7P
     219805-98-8P 219805-99-9P 219806-00-5P
     RL: BUU (Biological use, unclassified); SPN (Synthetic preparation); BIOL
     (Biological study); PREP (Preparation); USES (Uses)
        (cationic copolymers of high mol. wt. for use in hair
        conditioners)
RN
     1072-63-5 HCAPLUS
     1H-Imidazole, 1-ethenyl- (9CI) (CA INDEX NAME)
      CH = CH_2
     87865-40-5 HCAPLUS
     \hbox{2-Imidazolidinone, 1,3-diethenyl-, polymer with 1-ethenyl-1H-imidazole and}\\
CN
     1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)
     CM
     CRN 13811-50-2
     CMF C7 H10 N2 O
```

$$CH = CH_2$$
 $N = O$ 
 $N = CH_2$ 
 $N = O$ 
 $N = CH_2$ 

CM 2

CRN 1072-63-5 CMF C5 H6 N2

$$N$$
 $N$ 
 $CH = CH_2$ 

CM 3

CRN 88-12-0 CMF C6 H9 N O

RN 219805-93-3 HCAPLUS

CN 2-Propen-1-aminium, N,N-dimethyl-N-2-propenyl-, chloride, polymer with 1,3-diethenyl-2-imidazolidinone and 1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)

CM

CRN 13811-50-2 CMF C7 H10 N2 O

CM 2

CRN 7398-69-8 CMF C8 H16 N . Cl LAMM 09/771,595

● c1-

CM 3

CRN 88-12-0 CMF C6 H9 N O

RN 219805-94-4 HCAPLUS

CN 1H-Imidazolium, 1-ethenyl-3-methyl-, chloride, polymer with 1,3-diethenyl-2-imidazolidinone and 1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)

CM 1

CRN 13811-50-2 CMF C7 H10 N2 O

$$CH = CH_2$$
 $N = 0$ 
 $CH = CH_2$ 

CM 2

CRN 13474-25-4 CMF C6 H9 N2 . C1

Me 
$$N$$
  $N$   $CH = CH2$ 

● Cl-

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 3

CRN 88-12-0 CMF C6 H9 N O

RN 219805-95-5 HCAPLUS
CN 1H-Imidazolium, 1-ethenyl-3-methyl-, methyl sulfate, polymer with 1,3-diethenyl-2-imidazolidinone and 1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)

CM

CRN 13811-50-2 · CMF C7 H10 N2 O

CM 2

CRN 88-12-0 CMF C6 H9 N O

CM 3

CRN 26591-72-0 CMF C6 H9 N2 . C H3 O4 S

CM 4

CRN 45534-45-0 CMF C6 H9 N2

Me 
$$N$$
  $N$   $CH = CH2$ 

## \*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 5

CRN 21228-90-0 CMF C H3 O4 S

Me- 0- SO3-

RN 219805-96-6 HCAPLUS
CN 1H-Imidazolium, 1-ethenyl-2,3-dimethyl-, methyl sulfate, polymer with 1,3-diethenyl-2-imidazolidinone and 1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)

CM 1

CRN 13811-50-2 CMF C7 H10 N2 O

CM 2

CRN 88-12-0 CMF C6 H9 N O

CM :

CRN 38862-40-7 CMF C7 H11 N2 . C H3 O4 S

CM 4

CRN 45657-58-7 CMF C7 H11 N2

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

```
CM
               CRN 21228-90-0
CMF C H3 O4 S
Me-0-803-
       219805-97-7 HCAPLUS
       H-Imidazolium, 1-ethenyl-3-methyl-, methyl sulfate, polymer with 1-ethenyl-2-pyrrolidinone and (1-methyl-1,2-ethanediyl))bis[oxy(methyl-1,2-ethanediyl)] di-2-propenoate (9CI) (CA INDEX NAME)
       CM
       CRN 42978-66-5
CMF C15 H24 O6
CCI IDS
       CDES *
H_2C = CH - C - O - CH_2 - CH_2 - O - CH_2 - CH_2 - O - CH_2 - CH_2 - O - C - CH = CH_2
                                      3 ( D1-Me )
              2
       CM
       CRN 88-12-0
       CMF C6 H9 N O
   сн== сн2
               3
       CM
       CRN 26591-72-0
       CMF C6 H9 N2 . C H3 O4 S
               CM
               CRN 45534-45-0
CMF C6 H9 N2
```

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 5

 $\text{CH} = \text{CH}_2$ 

CRN 21228-90-0 CMF C H3 O4 S

Me-0-S03-

RN 219805-98-8 HCAPLUS
CN 1H-Imidazolium, 1-ethenyl-3-methyl-, methyl sulfate, polymer with 1-ethenyl-2-pyrrolidinone and oxybis(2,1-ethanediyloxy-2,1-ethanediyl) di-2-propenoate (9CI) (CA INDEX NAME)

CM

CRN 17831-71-9 CMF C14 H22 O7

PAGE 1-B

— cн== cн<sub>2</sub>

CM 2

CRN 88-12-0 CMF C6 H9 N O

CM 3

CRN 26591-72-0 CMF C6 H9 N2 . C H3 O4 S

CM 4

CRN 45534-45-0 CMF C6 H9 N2

```
*** FRAGMENT DIAGRAM IS INCOMPLETE ***
            CM
            CRN 21228-90-0
CMF C H3 O4 S
Me-0-S03-
      219805-99-9 HCAPLUS
RN
      1H-Imidazolium, 1-ethenyl-3-methyl-, methyl sulfate, polymer with
      N, N-di-2-propenyl-2-propen-1-amine and 1-ethenyl-2-pyrrolidinone (9CI)
      (CA INDEX NAME)
      CM
          1
     CRN 102-70-5
CMF C9 H15 N
                 CH_2 - CH = CH_2
H_2C = CH - CH_2 - N - CH_2 - CH = CH_2
      CM
           2
     CRN 88-12-0
CMF C6 H9 N O
  \text{CH} = \text{CH}_2
           3
      CM
      CRN 26591-72-0
      CMF C6 H9 N2 . C H3 O4 S
            CM
           CRN 45534-45-0
CMF C6 H9 N2
       \mathtt{CH} = \mathtt{CH}_2
*** FRAGMENT DIAGRAM IS INCOMPLETE ***
            CM 5
            CRN 21228-90-0
CMF C H3 O4 S
```

Me- O- SO3-

RN 219806-00-5 HCAPLUS

CM 1

CRN 1471-17-6 CMF C14 H24 O4

$$\begin{array}{c} \text{CH}_2\text{--OH} \\ \text{H}_2\text{C}==\text{CH}-\text{CH}_2-\text{O}-\text{CH}_2-\text{C}-\text{CH}_2-\text{O}-\text{CH}_2-\text{CH}==\text{CH}_2\\ \text{CH}_2-\text{O}-\text{CH}_2-\text{CH}==\text{CH}_2\\ \text{CH}_2-\text{O}-\text{CH}_2-\text{CH}==\text{CH}_2\\ \end{array}$$

CM 2

CRN 88-12-0 CMF C6 H9 N O

CM 3

CRN 26591-72-0

CMF C6 H9 N2 . C H3 O4 S

CM 4

CRN 45534-45-0 CMF C6 H9 N2

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 5

CRN 21228-90-0 CMF C H3 O4 S

Me-0-SO3-

```
=> d bib abs hitstr 8
L10 ANSWER 8 OF 9 HCAPLUS COPYRIGHT 2001 ACS
      1999:81688 HCAPLUS
DN
      130:129756
      Cross-linked cationic copolymers with N-vinylimidazoles
TΙ
ΤN
      Zeitz, Katrin; Hoessel, Peter; Dieing, Reinhold; Sanner, Axel
PA
      BASF A.-G., Germany
      Ger. Offen., 6 pp.
      CODEN: GWXXBX
\mathsf{D}\mathbf{T}
      Patent
LA
      German
FAN.CNT 1
      PATENT NO.
                           KIND DATE
                                                      APPLICATION NO. DATE
PΤ
      DE 19731907
                            A1 19990128
                                                       DE 1997-19731907 19970724
      EP 913143
                           A2 19990506
A3 20000112
                                                       EP 1998-111949 19980629
      EP 913143
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

JP 11079954 A2 19990323 JP 1998-206334 19980722

PRAI DE 1997-19731907 19970724
      Copolymers produced by radical polymn. of an N-
      vinylimidazole or quaternized N-vinylimidazole 1-99.99,
      a neutral or basic water-sol. monomer 0-98.99, an unsatd. acid or unsatd. anhydride 0-49.99, an addnl. monomer 0-50, and a bi- or polyfunctional
      monomer 0.01-10 wt.% and subsequent quaternization or protonation (in case
      a nonquaternized N-vinylimidazole was used) have excellent
      hair-conditioning and gel-forming properties and are useful as hair fixatives. Thus, a mixt. of H2O 560, vinylpyrrolidone 320,
      vinylimidazolium methosulfate 160, tripropylene glycol diacrylate
      1.2, and 2,2'-azobis(2-amidinopropane)-2HCl was polymd. at 70.degree. under N2 for 1 h. This copolymer (1.5% in H2O) formed a clear gel with a viscosity of 26,000 mPa s with very good fixative action and
      conferred good combability on the hair.
      1072-63-5D, N-Vinylimidazole, quaternized, polymers
      219916-98-0
      RL: BUU (Biological use, unclassified); BIOL (Biological study); USES
          (crosslinked cationic copolymers with N-
          vinylimidazoles)
RN
      1072-63-5 HCAPLUS
      1H-Imidazole, 1-ethenyl- (9CI) (CA INDEX NAME)
       CH== CH2
      219916-98-0 HCAPLUS
      2-Propenoic acid, (1-methyl-1,2-ethanediyl)bis[oxy(methyl-2,1-ethanediyl)] ester, polymer with 1-ethenyl-1H-imidazole mono(methyl sulfate) and
      1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)
      CRN 42978-66-5
      CMF C15 H24 O6
CCI IDS
      CDES *
```

$$\begin{array}{c} {\rm O} \\ \parallel \\ {\rm H}_2{\rm C} = {\rm CH}_-{\rm C} - {\rm O} - {\rm CH}_2 - {\rm CH}_2 - {\rm O} - {\rm CH}_2 - {\rm CH}_2 - {\rm O} - {\rm CH}_2 - {\rm CH}_2 - {\rm O} - {\rm CH}_2 - {\rm CH}_2 - {\rm CH}_2 - {\rm O} - {\rm CH}_2 - {\rm CH}_2$$

3 ( D1 -- Me )

CM 2

CRN 88-12-0 CMF C6 H9 N O

CM 3

CRN 161088-76-2 CMF C5 H6 N2 . C H4 O4 S

CM 4

CRN 1072-63-5 CMF C5 H6 N2

$$N$$
 $CH = CH_2$ 

CM 5

CRN 75-93-4 CMF C H4 O4 S

```
=> d bib abs hitstr 9
L10 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2001 ACS
    1997:402901 HCAPLUS
ΑN
DN
     127:18413
    Preparing polymer powders which are redispersible in aqueous media
TΙ
IN
    Pakusch, Joachim; Dieing, Reinhold; Tropsch, Juergen
PΑ
    BASF A.-G., Germany
    Eur. Pat. Appl., 23 pp.
     CODEN: EPXXDW
DT
    Patent
LA
    German
FAN.CNT 1
    PATENT NO.
                    KIND DATE
                                         APPLICATION NO. DATE
    EP 770640
РΤ
                     A2 19970502
                                          EP 1996-116679 19961017
    EP 770640
                     A3
                          19971029
        R: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LI, NL, PT, SE
                                      DE 1995-19540305 19951028
    DE 19540305 A1 19970430
    CA 2188685
                      AA 19970429
                                          CA 1996-2188685 19961023
    US 5874524
                           19990223
                                          US 1996-731989
                     Α
                                                          19961023
                     A1 19970501
    AU 9670406
                                          AU 1996-70406
                                                           19961025
    JP 09169812 A2 19970630
CN 1153181 A 19970702
                                          JP 1996-285586
                                                           19961028
                                                         19961028
                                          CN 1996-122881
PRAI DE 1995-19540305
                           19951028
    Polymer powders which disperse in aq. media so that the dispersed
    particles have pos. or neg. surface elec. charges are manufd. by
     spray-drying mixts. dispersions of the polymers such as those of
     (meth)acrylate esters, styrene, and vinyl compds. and polyelectrolytes
    which act as drying aids and are composed of polyions that have elec.
    charges different than that on the surfaces of the dispersed polymer
    particles. These powders are useful as hydraulic binder additives,
    paints, varnishes, adhesives, paper coatings, and synthetic resin plaster.
    A typical spray-dried compn. contained anionically stabilized dispersion
    of 11.2:219.2:5.6:252 acrylamide-Bu acrylate-methacrylamide-styrene
    copolymer and 15% 120:280 3-methyl-1-vinylimidazolium Me
     sulfate-vinylpyrrolidone copolymer.
    95144-24-4P, 3-Methyl-1-vinylimidazolium
    chloride-N-vinylpyrrolidone copolymer 131954-48-8P,
    Trimethylammoniopropylmethacrylamide chloride-N-vinylpyrrolidone
    copolymer 150599-70-5P, 3-Methyl-1-
    vinylimidazolium methyl sulfate-N-vinylpyrrolidone
    copolymer 174761-16-1P
    RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP
     (Preparation); USES (Uses)
        (prepg. polymer powders contg. polyelectrolytes which are redispersible
        in aq. media)
     95144-24-4 HCAPLUS
    1H-Imidazolium, 1-ethenyl-3-methyl-, chloride, polymer with
CN
    1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)
    CM
    CRN 13474-25-4
    CMF C6 H9 N2 . C1
```

• c1-

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM

CRN 88-12-0 CMF C6 H9 N O

RN 131954-48-8 HCAPLUS

CN 1-Propanaminium, N,N,N-trimethyl-3-[(2-methyl-1-oxo-2-propenyl)amino]-, chloride, polymer with 1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)

CM

CRN 51410-72-1 CMF C10 H21 N2 O . C1

$$\begin{array}{c} \text{O } \text{CH}_2 \\ || & || \\ \text{Me}_3 + \text{N-- (CH}_2) \ 3 - \text{NH-- C-- C-- Me} \end{array}$$

● c1-

CM 2

CRN 88-12-0 CMF C6 H9 N O

RN 150599-70-5 HCAPLUS

CN 1H-Imidazolium, 1-ethenyl-3-methyl-, methyl sulfate, polymer with 1-ethenyl-2-pyrrolidinone (9CI) (CA INDEX NAME)

CM 1

```
CRN 88-12-0
CMF C6 H9 N O
   cH = cH_2
       CM
       CRN 26591-72-0
       \mathtt{CMF} C6 H9 N2 . C H3 O4 S
              CM
             CRN 45534-45-0
CMF C6 H9 N2
        сн== сн2
*** FRAGMENT DIAGRAM IS INCOMPLETE ***
              CM
             CRN 21228-90-0
CMF C H3 O4 S
Me-0-803-
     174761-16-1 HCAPLUS
      1H-Imidazolium, 1-ethenyl-3-methyl-, methyl sulfate, polymer with 1-ethenylhexahydro-2H-azepin-2-one and 1-ethenyl-2-pyrrolidinone (9CI)
       (CA INDEX NAME)
       CM
             1
      CRN 2235-00-9
CMF C8 H13 N O
    CH== CH2
```

CM

CRN 88-12-0 CMF C6 H9 N O

```
ch = ch_2
      CM
            3
      CRN 26591-72-0
      CMF C6 H9 N2 . C H3 O4 S
            CRN 45534-45-0
CMF C6 H9 N2
 Me
       сн== сн2
*** FRAGMENT DIAGRAM IS INCOMPLETE ***
                  5
            CM
            CRN 21228-90-0
            CMF C H3 O4 S
Me-0-S03-
     25036-16-2P, Butyl acrylate-methacrylic acid-styrene copolymer 25085-44-3P, Butyl acrylate-methacrylamide-
ΙT
      styrene copolymer 25586-24-7P 27358-58-3P
     34407-02-8P, Butyl acrylate-hydroxyethyl acrylate-methacrylic acid-styrene copolymer 133651-90-8P, Acrylamide-butyl
      acrylate-methacrylamide-styrene copolymer
      RL: IMF (Industrial manufacture); POF (Polymer in formulation); PREP
      (Preparation); USES (Uses)
     (prepg. polymer powders contg. polyelectrolytes which are redispersible in aq. media)
25036-16-2 HCAPLUS
RN
      2-Propenoic acid, 2-methyl-, polymer with butyl 2-propenoate and
CN
      ethenylbenzene (9CI) (CA INDEX NAME)
      CM
      CRN 141-32-2
      CMF C7 H12 O2
        0
n-BuO-C-CH CH2
      CM
            2
     CRN 100-42-5
CMF C8 H8
```

 $H_2C == CH - Ph$ CM 3 CRN 79-41-4 CMF C4 H6 O2 СH<sub>2</sub> Me-C-CO2H 25085-44-3 HCAPLUS 2-Propenoic acid, butyl ester, polymer with ethenylbenzene and 2-methyl-2-propenamide (9CI) (CA INDEX NAME) CM 1 CRN 141-32-2 CMF C7 H12 O2 0 n-BuO- C- CH== CH2 CM 2 CRN 100-42-5 CMF C8 H8  $H_2C == CH - Ph$ CM 3, CRN 79-39-0 CMF C4 H7 N O H<sub>2</sub>C O Me-C-C-NH2 RN 25586-24-7 HCAPLUS 2-Propenoic acid, polymer with butyl 2-propenoate, ethenylbenzene and 2-propenamide (9CI) (CA INDEX NAME) CM 1 CRN 141-32-2 CMF C7 H12 O2

0 || n-BuO-C-CH-CH2 CM 2

CRN 100-42-5 CMF C8 H8

H2C== CH Ph

CM 3

CRN 79-10-7 CMF C3 H4 O2

CM 4

CRN 79-06-1 CMF C3 H5 N O

RN 27358-58-3 HCAPLUS

2-Propenoic acid, 2-methyl-, polymer with ethenylbenzene, 2-ethylhexyl 2-propenoate and 2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 103-11-7 CMF C11 H20 O2

CM 2

CRN 100-42-5 CMF C8 H8

 $H_2C = CH - Ph$ 

CM 3

CRN 79-41-4 CMF C4 H6 O2

```
CH<sub>2</sub>
Me- C-- CO2H
       CM
       CRN 79-06-1
       CMF C3 H5 N O
H_2N-C-CH-=CH_2
       34407-02-8 HCAPLUS
      2-Propenoic acid, 2-methyl-, polymer with butyl 2-propenoate, ethenylbenzene and 2-hydroxyethyl 2-propenoate (9CI) (CA INDEX NAME)
       CM
      CRN 818-61-1
CMF C5 H8 O3
HO-CH2-CH2-O-C-CH=CH2
       CM 2
      CRN 141-32-2
CMF C7 H12 O2
         0
n-BuO-C-CH---CH2
              3
       CM
      CRN 100-42-5
CMF C8 H8
H_2C = CH - Ph
       CM
      CRN 79-41-4
CMF C4 H6 O2
     CH<sub>2</sub>
Me - C CO2H
```

2-Propenoic acid, butyl ester, polymer with ethenylbenzene,

2-methyl-2-propenamide and 2-propenamide (9CI) (CA INDEX NAME)

133651-90-8 HCAPLUS

RN

CN

$$\begin{array}{c|c} ^{\text{H}_2\text{C}} \text{C} & \text{O} \\ \parallel & \parallel \\ \text{Me} - \text{C} - \text{C} - \text{NH}_2 \end{array}$$